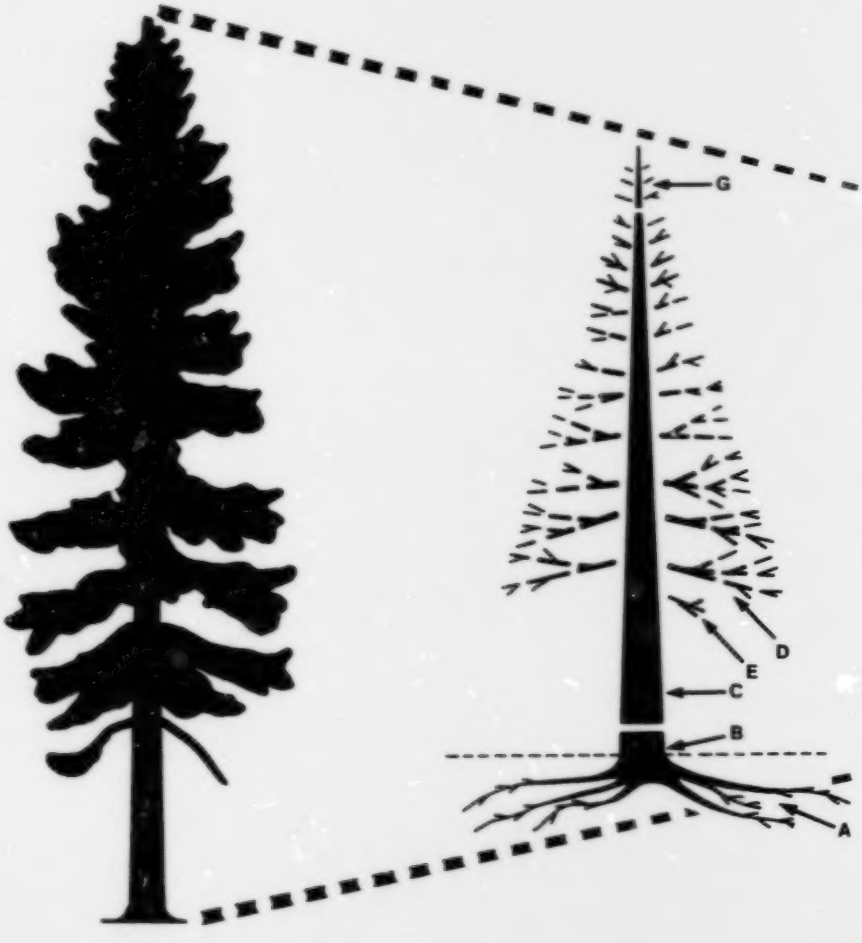
Environment Canada | Environnement Canada
Canadian Forestry Service | Service canadien des forêts

Metric single-tree weight tables for the Yukon Territory

G.H. Manning, M.R.C. Massie and J.Rudd

Environment Canada | Environnement Canada
0050453B VOL ISS 250 1984
EXC # 001
SD 391 C37
REPORT BC-X (PACIFIC FOREST RESEARC
H CENTRE)
OOFF

Information Report BC-X-250
Pacific Forest Research Centre



HEIGHT(M) DBH(CM)	4	6	8	10
4	2.23	3.00	3.77	4.54
6	4.15	5.88	7.61	9.34
8	6.84	9.91	12.98	16.06
10	10.30	15.10	19.90	24.70
12	14.52	21.43	28.34	35.26
14	19.51	28.92	38.33	47.74
16	25.27	37.56	49.85	62.14
18	31.80	47.35	62.90	78.46
20		58.30	77.50	96.70
22			93.62	116.86

Energy ENFOR from the Forest

85-0156/

Metric single-tree weight tables for the Yukon Territory

By

G.H. Manning*, M.R.C. Massie**, and J. Rudd*

*Pacific Forest Research Centre
Canadian Forestry Service
Environment Canada

**Nawitka Renewable Resource Consultants
840 Cormorant St.
Victoria, B.C.

Environment Canada
Canadian Forestry Service
Pacific Forest Research Centre

BC-X-250

1984

Environment Canada
Canadian Forestry Service
Pacific Forest Research Centre
506 West Burnside Road
Victoria, B.C.
V8Z 1M5

© Minister of Supply & Services Canada, 1984
ISSN 0705-3274
ISBN 0-662-13366-8
Cat. No. Fo46-17/250E

Foreword

ENFOR is the acronym for the Canadian government's Energy from the FORest (ÉNergie de la FORêt) program of research and development aimed at securing the knowledge and technical competence to facilitate in the medium to long term a greatly increased contribution from forest biomass to our nation's primary energy production. This program is part of a much larger federal government initiative to promote the development and use of renewable energy as a means of reducing dependence on petroleum and other nonrenewable energy sources.

The Canadian Forestry Service (CFS) administers the ENFOR Biomass Production program component which deals with such forest-oriented subjects as inventory, harvesting technology, silviculture, and environmental impacts. (The other component, Biomass Conversion, deals with the technology of converting biomass to energy or fuels, and is administered by the Renewable Energy Branch of the Department of Energy, Mines and Resources.) Most Biomass Production projects, although developed by CFS scientists in the light of ENFOR program objectives, are carried out under contract by forestry consultants and research specialists. Contractors are selected in accordance with science procurement tendering procedures of the Department of Supply and Services. For further information on the ENFOR Biomass Production program, contact:

ENFOR Secretariat
Canadian Forestry Service
Department of the Environment
Ottawa, Ontario
K1A 1G5

This report is based on ENFOR projects P-141 and P-246, carried out under contract (DSS File No. 05SB.KL017-9-1150 and DSS File No. 04SB.KH603-2-0020) by Nawitka Renewable Resource Consultants Ltd., Victoria, B.C.

Abstract

Metric weight tables, by component, are presented for the four major tree species in the Yukon Territory. Weight by component is shown as a function of diameter and height. The equation form for white spruce, black spruce, lodgepole pine and trembling aspen is: $y = a + bD^2H + e$

Résumé

On donne les tables de masse en unités métriques de chaque élément constitutif des arbres des quatre principales essences du Yukon. La masse de chaque élément est donnée comme une fonction du diamètre et de la hauteur. La forme générale de l'équation pour l'épinette blanche, l'épinette noire, le pin tordu et le peuplier faux-tremble est la suivante: $y = a + bD^2H + e$

Table of Contents

Foreword 3

Abstract/Résumé 5

Introduction 9

Methods 9
- Sampling 9
- Measurements 9
- Calculations 11

Results 11

References 12

Appendix A 13

Appendix B 19

List of Tables

APPENDIX A

A1. Yukon Biomass Project, Trees Sampled, 1980-82 Field Seasons, by Species and Diameter Class 14
A2. Yukon Biomass Project, Plot/Tree Locations 15

APPENDIX B

White Spruce

B1. Green Weight Table for White Spruce (All Ages) Yukon Territory — Weight of Stem Inside Bark (Kilograms) 20
B2. Green Weight Table for White Spruce (All Ages) Yukon Territory — Weight of Bark (Kilograms) 21
B3. Green Weight Table for White Spruce (All Ages) Yukon Territory — Weight of Branches (Kilograms) 22
B4. Green Weight Table for White Spruce (All Ages) Yukon Territory — Weight of Twigs and Foliage (Kilograms) 23
B5. Green Weight Table for White Spruce (All Ages) Yukon Territory — Weight of Dead Branches (Kilograms) 24
B6. Green Weight Table for White Spruce (All Ages) Yukon Territory — Weight of Total Tree Components (Kilograms) 25
B7. Oven Dry Weight Table for White Spruce (All Ages) Yukon Territory — Weight of Bole Wood (Kilograms) 26
B8. Oven Dry Weight Table for White Spruce (All Ages) Yukon Territory — Weight of Bole Bark (Kilograms) 27
B9. Oven Dry Weight Table for White Spruce (All Ages) Yukon Territory — Weight of Branches (Kilograms) 28
B10. Oven Dry Weight Table for White Spruce (All Ages) Yukon Territory — Weight of Twigs and Foliage (Kilograms) 29
B11. Oven Dry Weight Table for White Spruce (All Ages) Yukon Territory — Weight of Total Tree Components (Kilograms) 30

Lodgepole Pine

B12. Green Weight Table for Lodgepole Pine (All Ages) Yukon Territory — Weight of Bole Wood (Kilograms) 31
B13. Green Weight Table for Lodgepole Pine (All Ages) Yukon Territory — Weight of Bole Bark (Kilograms) 32
B14. Green Weight Table for Lodgepole Pine (All Ages) Yukon Territory — Weight of Branches (Kilograms) 33
B15. Green Weight Table for Lodgepole Pine (All Ages) Yukon Territory — Weight of Twigs and Foliage (Kilograms) 34
B16. Green Weight Table for Lodgepole Pine (All Ages) Yukon Territory — Air Dry Weight of Dead Branches (Kilograms) 35
B17. Green Weight Table for Lodgepole Pine (All Ages) Yukon Territory — Weight of Total Tree Components (Kilograms) 36
B18. Oven Dry Weight Table for Lodgepole Pine (All Ages) Yukon Territory — Weight of Bole Wood (Kilograms) 37

B19. Oven Dry Weight Table for Lodgepole Pine (All Ages) Yukon Territory — Weight of Bole Bark (Kilograms) 38
B20. Oven Dry Weight Table for Lodgepole Pine (All Ages) Yukon Territory — Weight of Branches (Kilograms) 39
B21. Oven Dry Weight Table for Lodgepole Pine (All Ages) Yukon Territory — Weight of Twigs and Foliage (Kilograms) 40
B22. Oven Dry Weight Table for Lodgepole Pine (All Ages) Yukon Territory — Weight of Total Tree Components (Kilograms) 41

Black Spruce

B23. Green Weight Table for Black Spruce (All Ages) Yukon Territory — Weight of Bole Wood (Kilograms) 42
B24. Green Weight Table for Black Spruce (All Ages) Yukon Territory — Weight of Bole Bark (Kilograms) 43
B25. Green Weight Table for Black Spruce (All Ages) Yukon Territory — Weight of Branches (Kilograms) 44
B26. Green Weight Table for Black Spruce (All Ages) Yukon Territory — Weight of Twigs and Foliage (Kilograms) 45
B27. Green Weight Table for Black Spruce (All Ages) Yukon Territory — Air Dry Weight of Dead Branches (Kilograms) 46
B28. Green Weight Table for Black Spruce (All Ages) Yukon Territory — Weight of Total Tree Components (Kilograms) 47
B29. Oven Dry Weight Table for Black Spruce (All Ages) Yukon Territory — Weight of Bole Wood (Kilograms) 48
B30. Oven Dry Weight Table for Black Spruce (All Ages) Yukon Territory — Weight of Bole Bark (Kilograms) 49
B31. Oven Dry Weight Table for Black Spruce (All Ages) Yukon Territory — Weight of Branches (Kilograms) 50
B32. Oven Dry Weight Table for Black Spruce (All Ages) Yukon Territory — Weight of Twigs and Foliage (Kilograms) 51
B33. Oven Dry Weight Table for Black Spruce (All Ages) Yukon Territory — Weight of Total Tree Components (Kilograms) 52

Trembling Aspen

B34. Green Weight Table for Trembling Aspen (All Ages) Yukon Territory — Weight of Bole Wood (Kilograms) 53
B35. Green Weight Table for Trembling Aspen (All Ages) Yukon Territory — Weight of Bole Bark (Kilograms) 54
B36. Green Weight Table for Trembling Aspen (All Ages) Yukon Territory — Weight of Branches, Twigs & Foliage (Kilograms) 55
B37. Green Weight Table for Trembling Aspen (All Ages) Yukon Territory — Weight of Total Tree Components (Kilograms) 56
B38. Oven Dry Weight Table for Trembling Aspen (All Ages) Yukon Territory — Weight of Bole Wood (Kilograms) 57
B39. Oven Dry Weight Table for Trembling Aspen (All Ages) Yukon Territory — Weight of Bole Bark (Kilograms) 58
B40. Oven Dry Weight Table for Trembling Aspen (All Ages) Yukon Territory — Weight of Branches, Twigs and Foliage (Kilograms) 59
B41. Oven Dry Weight Table for Trembling Aspen (All Ages) Yukon Territory — Weight of Total Tree Components (Kilograms) 60

Introduction

The Canadian Forestry Service, through its ENergy from the FORest (ENFOR) program, funded a study of tree component weights in the Yukon Territory. The study, conducted by Nawitka Renewable Resource Consultants, over the period 1980 to 1982, was designed to permit the conversion of volume-based forest inventory to weight-based total biomass inventory which could then be used to assess biomass energy potential in the Yukon. A secondary use of the data was to provide estimates of slash loading or fire hazard following logging, blowdown, or insect attack.

The most useful way to present weight data accurately to all users is through weight tables. A number of these have been developed for various species and purposes across North America e.g., Clark 1982, Saucier and Boyd 1982, Singh 1982 and Young *et al.* 1980. Our presentation follows the pattern developed in these reports.

Methods

Sampling

Between 1980 and 1982, 368 white spruce (*Picea glauca* (Moench) Voss), 302 black spruce (*Picea mariana* (Mill) B.S.P.), 149 lodgepole pine (*Pinus contorta* Dougl.), and 201 trembling aspen (*Populus tremuloides* Michx.) were destructively sampled. These samples were taken on 111 randomly selected plots located in the accessible portions of the Yukon in ecoregions 2, 4, 5, 8, 9, 11, and 12 (Oswald and Senyk 1977). Samples were taken in ecoregion 1 which were accessible only by air. Sample tree allocations by species and size class was based on the reconnaissance inventory of Gairns (1968), within the methodological framework of Young (1976). Sample locations and distributions are shown in Appendix A.

Measurements

Field and laboratory procedures generally followed those outlined in Alemdag (1980) and Ker (1980). In brief, they were as follows.

Basic tree data were collected on each sample tree prior to destructive sampling. Important data were species, diameter breast height (1.3 m to nearest 0.1 cm), total tree height (including stump to nearest 1.0 cm), crown width (to nearest 0.1 m), crown length (to nearest 1.0 cm), cover type, and crown class.

Stem data were collected from each selected tree in the following manner. After each sample tree was selected, felled and delimbed, sample sections were cut from the stem between stump height and dbh, and at intervals of 2.0 m starting at dbh. The fresh weight of each stem section was obtained as below.

a. **Sections less than 60 cm diameter small end**

1. Each section was weighed.

2. A disc (2.0-2.5 cm thick) was cut from the **small** end of the section. Bark and wood were separated, weighed, and weights recorded for each disc.

b. **Sections with greater than 60 cm diameter small end**

1. Volume was calculated by Smalian's Formula

$$V = h\,(Ab + Au)/2$$

where

V = volume (m^3)
h = height of section (m)
Au = area, inside bark, of upper cross section (m^2)
Ab = same for lower cross sections

2. A sample disc was cut from the *small* end of the section. In extremely large pieces, a wedge was taken from this. Green weight of this disc or segment was taken, following removal of bark. The weight of bark was taken. Volume of the disc or segment, and bark was determined as per TAPPI standard T18m-53. The green weight-volume ratio was applied to the whole section (with bark and without bark) and recorded. The disc and

bark were transported to the lab for dry weight determination.

c. **Stump**

A disc (2.0-2.5 cm thick) was removed from the top of the stump. Bark and wood were separated and weighed, and weights were recorded for each disc.

d. **General**

Fresh weights of wood and bark for each disc or segment were determined at a field lab within 24 hours of cutting. Each disc was identified by tree number and disc number, and at the end of each week, all discs were brought to the main lab for drying and subsequent weighing.

Crown data were taken from selected sample trees following felling, bucking, and delimbing. The fresh weights were taken as below.

a. **Softwood**

The proportions of foliage, wood, and bark in a softwood branch vary with the species and with the size and relative position of the branch, as well as site and stand conditions. This variation is a source of potential bias in the estimation of crown dry weights, in view of (1) the need for some kind of subsampling system, (2) the low precision associated with small sample sizes, and (3) the practical difficulties involved in constructing efficient, unbiased sampling frames for crown weight estimation. The crown sampling methods used in this study attempted to reduce bias by taking branch size into account.

All live branches were sorted into three groups: (1) those with basal diameter (**d**) greater than 2.5 cm (measured 3 cm from the base of the branch), (2) those with basal diameter 0.5-2.5 cm, and (3) those with basal diameter less than 0.5 cm. The total green weight of each of the group was taken and recorded. The total weight of dead branches (all sizes) was also taken and recorded.

In addition, two branches were randomly selected from each of the three branch size classes from each tree to provide data for estimation of dry crown component weights. These branches were flagged prior to delimbing. The fresh weight of each of the sample branches was obtained in the field and the sample branches were bagged, labelled, and brought into the main lab for drying.

b. **Trembling aspen**

Hardwood crowns were cut into sections less than 2 m long and then sorted into the following size classes according to the mid-diameter of the section: less than 2 cm (including all foliage), 2-6 cm, 6-10 cm, and greater than 10 cm. The total weight of material in each of these size classes was obtained in the field laboratory and recorded.

Samples were taken from each size class for each tree as follows: two branches were randomly selected from each class for estimation of the proportions of foliage and moisture. These samples were weighed in the field and brought back to the main lab for drying. For each size class, only the total weight of the sample was recorded.

Dry weight measurements were made for all samples at the B.C. Research laboratory in Vancouver. All disc and branch samples were transported to B.C. Research and dried in ovens at 105°C for at least 24 hours. Some of the larger discs required up to 45 hours, depending on the size of the disc.

Dry weights of stem disc samples were recorded. Softwood foliage was separated from twigs after drying, by hand, and then weighed separately. Dry softwood branch and foliage weight data were recorded.

Foliage of hardwood branch samples was separated by hand after drying and then weighed. The total dry weight of foliage and branch was recorded.

Total component dry weights were calculated using the field and laboratory measurements, and the appropriately derived ratios for green

weight/oven-dry weight, bark/wood, and foliage/wood. Inspection of the data revealed that foliage and twigs (less than 0.5 cm) should be combined and that all branches should also be combined for softwoods and that all branches, twigs, and foliage should be combined for trembling aspen. These combinations reduced the extreme variability found in the separate data sets.

Calculations

Green and dry weight equations were calculated for each species and component. Two equation forms were initially fitted:

a. The allometric form:

$$\ln y = \ln a + b \ln x + \ln e$$

b. The linear form:

$$y = a + bx + e$$

where y = component weight

$x = D^2H$

a + b are the regression coefficients

e is the error

Because additivity of components was required for the National Biomass Inventory, the allometric form was rejected (Kozak 1970). The second model does provide additivity, and was found to provide unbiased estimates by Crow and Laidly (1980) and Jacobs and Monteith (1981). However, in the present case, this model did not provide a good fit of the data, as determined by inspection of the residuals. This conclusion parallels the findings of Evert (1983) for trembling aspen. As a result, weighted least squares were used to calculate the equations, following the technique described by Schreuder and Swank (1973) and Lavigne (1982), weights being based on the term D^2H.

Equations for the following components, by species, were fitted using least squares regression:

a. Softwood weights (green and dry)

Weight of stem inside bark
Weight of stem bark
Weight of branches (greater than 0.5 cm)
Weight of twigs (less than 0.5 cm) and foliage
Weight of dead branches[1]

Total weight of tree

b. Trembling aspen weights (green and dry)

Weight of stem inside bark
Weight of stem bark
Weight of branches, twigs, and foliage

Total weight of tree

Results

Metric weight tables, by species, component, total tree weight, green, and dry, are shown in Appendix B. For each species, the range of the basic data is indicated by the shaded area on the initial table.

[1] Air dry weight of dead branches was considered a component of both green (field) and the dry (oven-dry) weight series. The air dry dead branches were not sampled for oven-drying.

References

Alemdag, I.S. 1980. Manual of data collection and processing for the development of forest biomass relationships. Can. For. Serv., Inf. Rep. PI-X-4.

Clark, A., III. 1982. Predicted weights and volumes of firewood in hardwood trees in the southeast. USDA For. Serv., Res. Paper 5E-226.

Crow, T.R. and P.R. Laidly. 1980. Alternative models for estimating woody plant biomass. Can. J. For. Res. 10: 367-370.

Evert, F. 1983. A national system of equations for estimating ovendry mass of trembling aspen *Populus tremuloides* Michx. Can. For. Serv. Inf. Rep. PI-X-24.

Gairns, C.H. 1968. The Yukon economy—its potential for growth and continuity: Volume III—Reference study on forest resources. D. Wm. Carr and Assoc. for Dep. of Indian Affairs and Northern Development and the Yukon Territorial Government, Ottawa.

Jacobs, M.W. and D.B. Monteith. 1981. Feasibility of developing regional weight tables. J. For. 79: 676-677.

Ker, M.F. 1980. Tree biomass equations for seven species in southwestern New Brunswick. Can. For. Serv., Inf. Rep. M-X-114.

Kozak, A. 1970. Methods for ensuring additivity of biomass components by regression analysis. For. Chron. 46: 402-404.

Lavigne, M.B. 1982. Tree mass equations for common species of Newfoundland. Can. For. Serv., Inf. Rep. N-X-213.

Oswald, E.T. and J.P. Senyk. 1977. Ecoregions of Yukon Territory. Can. For. Serv. Inf. Rep. BC-X-164.

Saucier, J.R. and J.A. Boyd. 1982. Aboveground biomass of Virginia pine in north Georgia. USDA Forest Service, Res. Paper SE-232.

Schreuder, H.T. and W.T. Swank. 1973. Statistical considerations in sampling biomass and surface area over time for a *Pinus strobus* L. forest. *In*: IUFRO Biomass Studies. College of Life Sciences and Agriculture, Univ. of Maine at Orono, pp. 131-142.

Singh, T. 1982. Weight tables for important tree species in the prairie provinces. Can. For. Serv., North. For. Res. Cent., Note No. 14.

Young, H.E. 1976. A summary and analysis of weight table studies. *In* IUFRO. Papers presented during the meeting of Section 4.01—Mensuration, growth and yield. Working Party on the Mensuration of Forest Biomass. XVIth International Congress of IUFRO, June 22, 1976, Oslo, Norway.

Young, H.E., J.H. Ribe, and K. Wainwright. 1980. Weight tables for the tree and shrub species in Maine. Life Sciences and Agriculture Exp. Station, Univ. of Maine at Orono, Misc. Rep. 230.

Appendix A

Table A1. Yukon Biomass Project
Trees Sampled, 1980-82 Field Seasons, by Species and Diameter Class

Eco-Region	BLACK SPRUCE				WHITE SPRUCE					LODGEPOLE PINE				ASPEN			
	Diameter Class (cm)																
	2.5-10	10-20	20-30	30	2.5-10	10-20	20-30	30-40	40+	2.5-10	10-20	20-30	30+	2.5-10	10-20	20-30	30
1	0	0	0	0	8	19	16	16	9	0	0	0	0	0	0	0	0
Total			0				68					0				0	
									68								
2	16	22	4	0	14	18	13	5	0	24	26	4	0	12	16	4	2
Total			42				50					54				34	
									180								
4	8	22	4	0	10	21	5	5	0	10	14	5	0	11	12	5	0
Total			34				41					29				28	
									132								
5	10	17	5	0	9	18	5	3	0	14	22	5	2	10	13	5	2
Total			32				35					43				30	
									140								
8	14	26	1	0	14	17	7	3	0	0	0	0	0	9	13	3	1
Total			41				41					0				26	
									108								
9	18	24	11	0	9	13	7	4	0	0	0	0	0	5	12	3	0
Total			53				33					0				20	
									106								
11	18	21	8	0	16	18	8	5	0	0	0	0	0	14	21	3	2
Total			47				47					0				40	
									134								
12	17	32	4	0	15	28	7	3	0	8	10	3	2	8	10	3	2
Total			53				53					23				23	
									152								
SPECIES TOTAL		302				368					149				201		
GRAND TOTAL	1020																

1980 — 450 trees in Regions 2, 4, 5 1981 — 500 trees in Regions 8, 9, 11, 12 1982 — 120 trees in Regions 1, 2

Table A2. Yukon Biomass Project Plot/Tree Locations

Plot Number	Eco-Region	Road	Kilometre Mark	Magnetic Bearing	Tree Numbers
320	2	Alaska	1050.1	220°	1-13, 66 & 67
321	2	Alaska	1050.1	20°	14-23, 91-95
324	2	Old Alaska	1031.5	220°*	24-36
305	2	Alaska	1102.5	330°	37-53
P6	2	Alaska	1113.6	120°	54, 79-90
317	2	Alaska	1058.55	308°	55-65
316	2	Alaska	1064.15	346°	68-78
X-1	2	Alaska	1098.0	160°	96-102
297	2	Alaska	1118.7	104°	103-106
P5	2	Alaska	1135.1	120°	107-110, 115-125
289	2	Alaska	1139.0	352°	111-114
287	2	Alaska	1140.0	164°	126-128
286	4	Alaska	1140.3	10°	129-134
283	4	Alaska	1147.4	290°	135-152
282	4	Alaska	1157.0	160°	153-171
P3	4	Alaska	1175.8	166°	172-185
276	4	Alaska	1175.8	332°	186-188
X-2	4	Alaska	1162.0	336°	189-198, 229-235
X-3	4	Alaska	1177.0	160°	199-209, 236-245
X-4	4	Alaska	1178.0	150°	210-214, 250-260
P4	4	Alaska	1171.0	110°	215-228
279	4	Alaska	1168.8	102°	246-249
238	5	Alaska	1258.3	27°	261-280
218	5	Alaska	1312.7	34°	281-296
214	5	Alaska	1319.2	193°	297-300
206	5	Alaska	1353.5	132°	301-310
203	5	Alaska	1356.0	158°	311-316, 339-346
202	5	Alaska	1357.1	240°	317-325, 351-357
201	5	Alaska	1357.55	287°	326-330, 347-350 & 358-363
214	5	Alaska	1319.2	193°	331-338
191	5	Alaska	1408.0	20°	364-377, 391-397
182	5	Alaska	1430.8	336°	378-382, 398-400
180	5	Alaska	1432.6	320°	383-390
151	8	Alaska	1562.1	335°	401-409
137	8	Alaska	1588.3	170°	410-421
129	8	Alaska	1614.9	158°	422-428
128	8	Alaska	1620.0	145°	429-442
72	8	Alaska	1775.7	210°	443-451
60	8	Alaska	1818.4	222°	452-465
54	8	Alaska	1831.6	180°	466-474
50	8	Alaska	1842.1	200°	475-493
47	8	Alaska	1848.3	200°	494-508

* bend part way down hill, right side facing north

Table A2. (Cont'd)

Plot Number	Eco-Region	Road	Kilometre Mark	Magnetic Bearing	Tree Numbers
28	9	Alaska	1885.1	232°	509-519
20	9	Alaska	1904.9	48°	520-522
P2	9	Alaska	1910.0	200°	523-533
15	9	Alaska	1915.6	240°	534-539
P1	9	Alaska	1937.5	90°	540-550
9	9	Alaska	1951.0	332°	551-560
7	9	Alaska	1953.6	338°	561-570, 574-588
4	9	Alaska	1957.7	220°	571-573, 589-614
K1	12	Klondike	386.0	64°	615-622
K2	12	Klondike	397.5	360°	623-635
K3	12	Klondike	406.0	20°	636-646
K4	12	Klondike	416.0	194°	647-668
K5	12	Klondike	452.0	302°	669-678
K6	12	Klondike	473.9	22°	679-698
K7	12	Klondike	488.7	102°	699-734
K8	12	Klondike	498.0	15°	735-751
K9	12	Klondike	498.1	203°	752-759
K10	12	Mayo	2.75	118°	760-766
K11	11	Klondike	584.0	214°	767-784
K12	11	Klondike	584.5	18°	785-808
K13	11	Klondike	595.0	315°	809-820
K14	11	Klondike	602.4	240°	821-834
K14A	11	Klondike	603.3	*	835-851
K18	11	Klondike	672.9	334°	852-858
K15	11	Klondike	657.5	160°	859-876
K16	11	Klondike	665.4	197°	877-888
K17	11	Klondike	665.4	320°	889-900
R-1	2	Robert Campbell	± 170.0	32°**	901-903
R-2	2	Robert Campbell	166.55	24°	904-909
R-3	2	Robert Campbell	160.55	210°	910-911
R-4	2	Robert Campbell	153.15	30°	912-917
R-5	2	Robert Campbell	120.9	42°	918-921
R-6	2	Robert Campbell	108.75	80°	922-926
R-7	2	Robert Campbell	95.10	264°	927-933
R-8	2	Robert Campbell	63.60	228°	934-943
R-9	2	Robert Campbell	42.2	125°	944-947
R-10	2	Robert Campbell	33.8	74°	948-950, 1019-1020

* south bank of Money Cr., below clearing

** right or east side of road, facing north.

Table A2 (cont'd)

Plot Number	Eco-Region	Geographic Description		Tree Numbers
		Upper Toobally Lake Narrows West Side, Upper Traverse:		
F22	1		Station 1	951-953
F23	1		Station 2	954-956
F24	1		Station 3	957-958
		Lower Traverse:		
F19	1		Station 1	959-962
F20	1		Station 2	963-964
F21	1		Station 3	965-966
		East Side, Lower Traverse:		
F16	1		Station 1	967-968
F17	1		Station 2	969-970
F18	1		Station 3	971
		Upper Traverse:		
F13	1		Station 1	972-973
F14	1		Station 2	974-975
F15	1		Station 3	976
		Rock River at Camp Creek, East Side, Lower Traverse:		
F4	1		Station 1	977-979
F5	1		Station 2	980-981
F6	1		Station 3	982-983
		Upper Traverse:		
F1	1		Station 1	984-985
F2	1		Station 2	986-987
F3	1		Station 3	988-989
		West Side, Upper Traverse:		
F10	1		Station 1	990-991
F11	1		Station 2	992-993
F12	1		Station 3	994-995
		Lower Traverse:		
F7	1		Station 1	996-997
F8	1		Station 2	998-999
F9	1		Station 3	1000-1001

Table A2 (cont'd)

Plot Number	Eco-Region	Geographic Description		Tree Numbers
		Beaver River at Larsen Creek Island, West Side, Lower Traverse:		
F29	1		Station 1	1002-1004
F30	1		Station 2	1005-1006
F31	1		Station 3	1007-1008
F32	1		Station 4	1009-1010
		Upper Traverse:		
F25	1		Station 1	1011-1012
F26	1		Station 2	1013
F27	1		Station 3	1014-1015
F28	1		Station 4	1016-1018

Appendix B

TABLE B1. GREEN WEIGHT TABLE FOR WHITE SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF STEM INSIDE BARK (KILOGRAMS)

HEIGHT(M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
4	2.28	3.00	3.77	4.54														
6	4.35	5.88	7.61	9.34	11.06	12.79												
8	6.84	9.91	13.98	18.06	19.13	22.20	25.27	28.34										
10	10.30	15.10	19.90	24.70	29.50	34.30	39.10	43.90	48.70									
12	14.52	21.43	28.34	35.26	42.17	49.08	55.99	62.90	69.82	76.73								
14	19.51	28.92	38.33	47.74	57.14	66.55	75.96	85.37	94.78	104.18								
16	25.27	37.56	49.85	62.14	74.42	86.71	99.00	111.29	123.58	135.86	148.2							
18		47.35	62.90	78.46	94.01	109.56	125.11	140.66	156.22	171.77	187.3	202.9	218.4					
20		58.30	77.50	96.70	115.90	135.10	154.30	173.50	192.70	211.90	231.1	250.3	269.5	288.7				
22			93.62	116.86	140.09	163.32	186.55	209.78	233.02	256.25	279.5	302.7	325.9	349.2	372.4			
24				138.94	166.58	194.23	221.88	249.53	277.18	304.82	332.5	360.1	387.8	415.4	443.1			
26					195.38	227.83	260.28	292.73	325.18	357.62	390.1	422.5	455.0	487.4	519.9			
28					226.49	264.12	301.75	339.38	377.01	414.65	452.3	489.9	527.6	565.2	602.8	640.4		
30					259.90	303.10	346.30	389.50	432.70	475.90	519.1	562.3	605.5	648.7	691.9	735.1	778.3	
32					295.61	344.76	393.91	443.06	492.22	541.37	590.5	639.7	688.8	738.0	787.1	836.3	885.4	
34					333.62	389.11	444.60	500.09	555.58	611.06	666.6	722.0	777.5	833.0	888.5	944.0	999.5	
36						436.15	498.36	560.57	622.78	684.98	747.2	809.4	871.6	933.8	996.0	1058.2	1120.4	1182.6
38							555.19	624.50	693.82	763.13	832.4	901.8	971.1	1040.4	1109.7	1179.0	1248.3	1317.6
40								691.90	768.70	845.50	922.3	999.1	1075.9	1152.7	1229.5	1306.3	1383.1	1459.9
42									847.42	932.09	1016.8	1101.4	1186.1	1270.8	1355.4	1440.1	1524.8	1609.5
44										1022.90	1115.8	1208.8	1301.7	1394.6	1487.5	1580.5	1673.4	1766.3
46											1219.5	1321.1	1422.6	1524.2	1625.8	1727.4	1828.9	1930.5
48												1438.4	1549.0	1659.6	1770.2	1880.8	1991.4	2101.9
50												1560.7	1680.7	1800.7	1920.7	2040.7	2160.7	2280.7
52														1947.6	2077.4	2207.2	2337.0	2466.7
54															2240.2	2380.2	2520.1	2660.1
56																	2710.2	2860.7

Data collected by destructive sampling of 368 trees in accessible locations of the Yukon.
Table shows total weight of bole wood inside bark (kilograms). Height shown is tree height (metres);
DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Wood} = 0.6956 + 0.02402D^2H$$

$R^2 = 0.9732$ SEE = 1.7166

TABLE B2. GREEN WEIGHT TABLE FOR WHITE SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF BARK (KILOGRAMS)

HEIGHT(M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
4			0.85	0.97														
6				1.75	2.03	2.31												
8	1.35				3.34	3.84	4.33	4.83										
10	1.91				5.02	5.80	6.57	7.35	8.13									
12	2.59	3.71			7.07	8.19	9.31	10.43	11.55	12.67								
14	3.40	4.93			9.50	11.03	12.55	14.07	15.60	17.12								
16	4.33	6.33			12.30	14.29	16.28	18.28	20.27	22.26	24.3							
18		7.91	10.43		15.49	18.00	20.52	23.04	25.56	28.08	30.6	33.1	35.6					
20		9.69	12.80	15.91	18.02	22.14	25.25	28.36	31.47	34.58	37.7	40.8	43.9	47.0				
22			15.41	19.18	22.94	26.71	30.48	34.24	38.01	41.77	45.5	49.3	53.1	56.8	60.6			
24				22.76	27.24	31.72	36.20	40.68	45.16	49.65	54.1	58.6	63.1	67.6	72.1			
26					31.91	37.17	42.43	47.68	52.94	58.20	63.5	68.7	74.0	79.2	84.5			
28					36.95	43.05	49.15	55.25	61.35	67.45	73.5	79.6	85.7	91.8	97.9	104.0		
30					42.36	49.37	56.37	63.37	70.37	77.37	84.4	91.4	98.4	105.4	112.4	119.4	126.4	
32					48.15	56.12	64.08	72.05	80.02	87.98	96.0	103.9	111.9	119.9	127.8	135.8	143.8	
34					54.31	63.31	72.30	81.29	90.29	99.28	108.3	117.3	126.3	135.3	144.2	153.2	162.2	
36						70.93	81.01	91.10	101.18	111.26	121.3	131.4	141.5	151.6	161.7	171.8	181.8	191.9
38							90.23	101.46	112.69	123.93	135.2	146.4	157.6	168.9	180.1	191.3	202.6	213.8
40								112.38	124.83	137.28	149.7	162.2	174.6	187.1	199.5	212.0	224.4	236.9
42									137.59	151.31	165.0	178.8	192.5	206.2	219.9	233.7	247.4	261.1
44										166.03	181.1	196.2	211.2	226.3	241.3	256.4	271.5	286.5
46											197.9	214.4	230.8	247.3	263.8	280.2	296.7	313.1
48												233.4	251.3	269.2	287.2	305.1	323.0	340.9
50												253.2	272.7	292.1	311.6	331.0	350.5	369.9
52														315.9	336.9	358.0	379.0	400.
54															363.3	386.0	408.7	431.4
56																	439.5	463.9

Data collected by destructive sampling of 368 trees in accessible locations of the Yukon.
Table shows total weight of bole bark (kilograms). Height shown is tree height (metres);
DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{bark} = 0.3509 + 0.003890D^2H$$

$$R^2 = 0.9079 \qquad SEE = 0.5338$$

TABLE B3. GREEN WEIGHT TABLE FOR WHITE SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF BRANCHES (KILOGRAMS)

HEIGHT(M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
4	0.64	0.70	0.77	0.84														
6	0.81	0.96	1.12	1.27	1.42	1.58												
8	1.05	1.32	1.60	1.87	2.14	2.42	2.69	2.96										
10	1.36	1.78	2.21	2.64	3.07	3.50	3.92	4.35	4.78									
12	1.73	2.35	2.96	3.58	4.20	4.81	5.43	6.05	6.66	7.28								
14	2.18	3.02	3.86	4.69	5.53	6.37	7.21	8.05	8.89	9.73								
16	2.69	3.79	4.88	5.98	7.07	8.17	9.26	10.36	11.46	12.55	13.6							
18		4.66	6.05	7.43	8.82	10.21	11.59	12.98	14.37	15.75	17.1	18.5	19.9					
20		5.64	7.35	9.06	10.77	12.48	14.19	15.91	17.62	19.33	21.0	22.8	24.5	26.2				
22			8.79	10.86	12.93	15.00	17.07	19.14	21.21	23.29	25.4	27.4	29.5	31.6	33.6			
24				12.83	15.29	17.76	20.22	22.69	25.15	27.62	30.1	32.5	35.0	37.5	39.9			
26					17.86	20.75	23.65	26.54	29.43	32.33	35.2	38.1	41.0	43.9	46.8			
28					20.63	23.99	27.34	30.70	34.05	37.41	40.8	44.1	47.5	50.8	54.2	57.5		
30					23.61	27.46	31.32	35.17	39.02	42.87	46.7	50.6	54.4	58.3	62.1	66.0	69.8	
32					26.80	31.18	35.56	39.94	44.33	48.71	53.1	57.5	61.9	66.2	70.6	75.0	79.4	
34					30.19	35.13	40.08	45.03	49.98	54.92	59.9	64.8	69.8	74.7	79.7	84.6	89.6	
36						39.33	44.87	50.42	55.97	61.51	67.1	72.6	78.2	83.7	89.2	94.8	100.3	105.9
38							49.94	56.12	62.30	68.48	74.1	80.8	87.0	93.2	99.4	105.6	111.7	117.9
40								62.13	68.98	75.83	82.7	89.5	96.4	103.2	110.1	116.9	123.8	130.6
42									76.00	83.55	91.1	98.6	106.2	113.7	121.3	128.8	136.4	143.9
44										91.65	99.9	108.2	116.5	124.8	133.1	141.4	149.6	157.9
46											109.2	118.2	127.3	136.3	145.4	154.5	163.5	172.6
48												128.7	138.6	148.4	158.3	168.1	178.0	187.9
50												139.6	150.3	161.0	171.7	182.4	193.1	203.8
52														174.1	185.7	197.2	208.8	220.4
54															200.2	212.7	225.1	237.6
56																	242.1	255.5

Data collected by destructive sampling of 368 trees in accessible locations of the Yukon.
Table shows total weight of branches (kilograms). Height shown is tree height (metres);
DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{br.} = 0.4995 + 0.00214D^2H$$

$$R^2 = 0.6080 \qquad SEE = 0.7395$$

TABLE B4. GREEN WEIGHT TABLE FOR WHITE SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF TWIGS AND FOLIAGE (KILOGRAMS)

HEIGHT(M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
4	[2.40]	[3.82]	2.79	2.96														
6	[2.81]	[3.26]	3.65	4.03	4.42	4.80												
8	3.47	[4.16]	[4.84]	5.53	6.21	6.90	7.58	8.27										
10	4.24	[5.31]	[6.38]	7.45	8.52	9.59	10.66	11.73	12.80									
12	5.19	6.73	[8.27]	9.81	11.35	12.89	14.43	15.97	17.51	19.05								
14	6.30	8.40	[10.49]	12.59	14.69	16.78	18.88	20.98	23.08	25.17								
16	7.58	10.32	[13.06]	15.80	18.54	21.28	24.02	26.76	29.50	32.24	35.0							
18		12.50	15.97	[19.44]	22.91	26.37	29.84	33.31	36.77	40.24	43.7	47.2	50.6					
20		14.94	19.22	23.50	[27.78]	32.06	36.34	40.62	44.90	49.18	53.5	57.7	62.0	66.3				
22			22.82	28.00	[33.18]	38.36	43.53	48.71	53.89	59.07	64.2	69.4	74.6	79.8	85.0			
24				32.92	39.08	[45.25]	51.41	57.57	63.74	69.90	76.1	82.2	88.4	94.6	100.7			
26					45.50	52.74	[59.97]	67.20	74.44	81.67	88.9	96.1	103.4	110.6	117.8			
28					52.44	60.83	69.21	[77.60]	85.99	94.38	102.8	111.2	119.5	[127.9]	136.3	144.7		
30					59.88	69.51	79.14	88.77	[98.40]	108.03	117.7	127.3	136.9	146.6	[156.2]	165.8	175.4	
32					67.85	78.80	[89.76]	100.72	111.67	122.63	133.6	144.5	155.5	166.5	177.4	188.4	199.3	
34					76.32	88.69	101.06	[113.43]	125.80	138.17	150.5	162.9	175.3	187.6	200.0	212.4	224.7	
36						99.17	113.04	[126.91]	140.78	154.64	168.5	182.4	196.2	210.1	224.0	[237.8]	251.7	265.6
38							125.71	141.16	156.61	172.06	[187.5]	203.0	218.4	233.9	249.3	264.8	280.2	295.7
40								156.18	173.30	190.42	207.5	[224.7]	241.8	258.9	276.0	293.1	[310.3]	327.4
42									190.85	209.73	228.6	247.5	[266.4]	285.2	304.1	323.0	341.9	360.7
44										229.97	250.7	[271.4]	292.1	[312.8]	333.5	354.3	375.0	[395.7]
46											273.8	296.4	319.1	341.7	[364.4]	[387.0]	[409.6]	[432.3]
48												322.6	347.2	371.9	[396.5]	[421.2]	[445.9]	[470.5]
50												349.9	376.6	[403.4]	[430.1]	[456.9]	[483.6]	[510.4]
52														436.1	465.0	494.0	[522.9]	[551.8]
54															501.3	532.5	563.7	[594.9]
56																	606.1	639.7

Data collected by destructive sampling of 368 trees in accessible locations of the Yukon.
Table shows total weight of twigs and foliage (kilograms). Height shown is tree height (metres);
DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{TFol} = 2.1036 + 0.005\overline{35}D^2H$$

$$R^2 = 0.5239 \qquad SEE = 2.1993$$

TABLE B5. GREEN WEIGHT TABLE FOR WHITE SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF DEAD BRANCHES (KILOGRAMS)

HEIGHT(M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
4	0.15	0.18	0.21	0.23														
6	0.22	0.29	0.35	0.42	0.49	0.55												
8	0.32	0.44	0.56	0.68	0.80	0.92	1.04	1.16										
10	0.46	0.64	0.83	1.06	1.20	1.39	1.57	1.76	1.95									
12	0.62	0.89	1.16	1.43	1.69	1.96	2.23	2.50	2.77	3.03								
14	0.82	1.18	1.55	1.91	2.28	2.64	3.01	3.37	3.73	4.10								
16	1.04	1.52	1.99	2.48	2.95	3.42	3.90	4.38	4.85	5.33	5.8							
18		1.90	2.50	3.10	3.71	4.31	4.91	5.51	6.12	6.72	7.3	7.9	8.5					
20		2.32	3.07	3.81	4.55	5.30	6.04	6.79	7.53	8.28	9.0	9.8	10.5	11.3				
22			3.69	4.59	5.49	6.39	7.30	8.20	9.10	10.00	10.9	11.8	12.7	13.6	14.5			
24				5.45	6.52	7.59	8.67	9.74	10.81	11.88	13.0	14.0	15.1	16.2	17.2			
26					7.64	8.90	10.16	11.41	12.67	13.93	15.2	16.4	17.7	19.0	20.2			
28					8.84	10.30	11.76	13.22	14.68	16.14	17.6	19.1	20.5	22.0	23.4	24.9		
30					10.14	11.82	13.49	15.17	16.84	18.52	20.2	21.9	23.5	25.2	26.9	28.6	30.2	
32					11.53	13.43	15.34	17.25	19.15	21.06	23.0	24.9	26.8	28.7	30.6	32.5	34.4	
34					13.00	15.15	17.31	19.46	21.61	23.76	25.9	28.1	30.2	32.4	34.5	36.7	38.8	
36						16.98	19.39	21.80	24.22	26.63	29.0	31.5	33.9	36.3	38.7	41.1	43.5	45.9
38							21.60	24.28	26.97	29.66	32.4	35.0	37.7	40.4	43.1	45.8	48.5	51.2
40								26.90	29.88	32.86	35.8	38.8	41.8	44.8	47.8	50.7	53.7	56.7
42									32.93	36.22	39.5	42.8	46.1	49.4	52.6	55.9	59.2	62.5
44										39.74	43.3	46.9	50.6	54.2	57.8	61.4	65.0	68.6
46											47.4	51.3	55.2	59.2	63.1	67.1	71.0	74.9
48												55.9	60.1	64.4	68.7	73.0	77.3	81.6
50												60.6	65.3	69.9	74.6	79.2	83.9	88.5
52														75.6	80.6	85.7	90.7	95.7
54															87.0	92.4	97.8	103.2
56																	105.2	111.0

Data collected by destructive sampling of 368 trees in accessible locations of the Yukon.
Table shows total weight of dead branches (kilograms). Height shown is tree height (metres);
DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Dead} = 0.0854 + 0.00093D^2H$$

$$R^2 = 0.4076 \quad SEE = 0.4840$$

TABLE B6. GREEN WEIGHT TABLE FOR WHITE SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF TOTAL TREE COMPONENTS (KILOGRAMS)

HEIGHT(M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
4	6.08	7.23	8.38	9.54														
6	8.98	11.58	14.19	16.80	19.42	22.03												
8	13.03	17.67	22.32	26.97	31.61	36.26	40.91	45.55										
10	18.25	25.52	32.77	40.03	47.30	54.56	61.81	69.07	76.33									
12	24.64	35.10	45.55	56.01	66.46	76.92	87.37	97.82	108.28	118.73								
14	32.19	46.42	60.65	74.88	89.11	103.34	117.57	131.80	146.03	160.26								
16	40.91	59.49	78.08	96.66	115.25	133.83	152.42	171.01	189.59	208.18	226.8							
18		74.30	97.82	121.35	144.87	168.39	191.91	215.44	238.96	262.48	286.0	309.5	333.0					
20		90.86	119.89	148.93	177.98	207.01	236.05	265.09	294.13	323.17	352.2	381.3	410.3	439.3				
22			144.29	179.43	214.57	249.70	284.84	319.98	355.12	390.26	425.4	460.5	495.7	530.8	565.9			
24				212.82	254.64	296.46	338.28	380.09	421.91	463.73	505.5	547.4	589.2	631.0	672.8			
26					298.20	347.28	396.36	445.43	494.51	543.59	592.7	641.7	690.8	739.9	789.0			
28					345.25	402.16	459.08	516.00	572.92	629.84	686.8	743.7	800.6	857.5	914.4	971.3		
30					395.77	461.11	526.45	591.79	657.14	722.47	787.8	853.2	918.5	983.8	1049.2	1114.5	1179.9	
32					449.79	524.13	598.47	672.82	747.16	821.50	895.8	970.2	1044.5	1118.9	1193.2	1267.6	1341.9	
34					507.29	591.21	675.14	759.07	842.99	926.92	1010.8	1094.8	1178.7	1262.6	1346.5	1430.5	1514.4	
36						662.36	756.45	850.54	944.63	1038.72	1132.8	1226.9	1321.0	1415.1	1509.2	1603.3	1697.3	1791.4
38							842.41	947.24	1052.08	1156.91	1261.7	1366.6	1471.4	1576.3	1681.1	1785.9	1890.8	1995.6
40								1049.17	1165.33	1281.49	1397.7	1513.8	1630.0	1746.1	1862.3	1978.5	2094.6	2210.8
42									1284.40	1412.47	1540.5	1668.6	1796.7	1924.7	2052.8	2180.9	2308.9	2437.0
44										1549.82	1690.4	1830.9	1971.5	2112.0	2252.6	2393.1	2533.7	2674.3
46											1847.2	2000.8	2154.4	2308.1	2461.7	2615.3	2768.9	2922.5
48												2178.3	2345.5	2512.8	2680.1	2847.3	3014.6	3181.9
50												2363.2	2544.7	2726.2	2907.7	3089.2	3270.7	3452.2
52														2948.4	3144.7	3341.0	3537.3	3733.6
54															3391.0	3602.7	3814.4	4026.1
56																	4101.9	4329.5

Data collected by destructive sampling of 368 trees in accessible locations of the Yukon.
Table shows total weight of total tree components (kilograms). Height shown is tree height (metres);
DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Tot} = 3.7350 + 0.03632D^2H$$

$R^2 = 0.9252$ SEE = 4.4526

TABLE B7. OVEN DRY WEIGHT TABLE FOR WHITE SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF BOLE WOOD (KILOGRAMS)

HEIGHT(M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
4	1.07	1.47	1.86	2.26														
6	2.06	2.96	3.85	4.74	5.63	6.53												
8	3.45	5.04	6.63	8.21	9.80	11.39	12.97	14.56										
10	5.24	7.72	10.20	12.68	15.16	17.64	20.12	22.60	25.08									
12	7.42	10.99	14.56	18.13	21.70	25.28	28.85	32.42	35.99	39.56								
14	10.00	14.86	19.72	24.58	29.44	34.30	39.16	44.02	48.89	53.75								
16	12.98	19.32	25.67	32.02	38.37	44.72	51.07	57.42	63.77	70.11	76.5							
18		24.38	32.42	40.45	48.49	56.52	64.56	72.59	80.63	88.66	96.7	104.7	112.8					
20		30.04	39.96	49.88	59.80	69.72	79.64	89.56	99.48	109.40	119.3	129.2	139.2	149.1				
22			48.29	60.29	72.30	84.30	96.30	108.31	120.31	132.31	144.3	156.3	168.3	180.3	192.3			
24				71.70	85.99	100.27	114.56	128.84	143.13	157.41	171.7	186.0	200.3	214.5	228.8			
26					100.87	117.63	134.40	151.16	167.93	184.69	201.5	218.2	235.0	251.7	268.5			
28					116.94	136.38	155.82	175.27	194.71	214.15	233.6	253.0	272.5	291.9	311.4	330.8		
30					134.20	156.52	178.84	201.16	223.48	245.80	268.1	290.4	312.8	335.1	357.4	379.7	402.0	
32					152.65	178.04	203.44	228.83	254.23	279.62	305.0	330.4	355.8	381.2	406.6	432.0	457.4	
34					172.29	200.96	229.63	258.30	286.97	315.63	344.3	373.0	401.6	430.3	459.0	487.6	516.3	
36						225.26	257.40	289.54	321.69	353.83	386.0	418.1	450.2	482.4	514.5	546.7	578.8	611.0
38							286.77	322.58	358.39	394.20	430.0	465.8	501.6	537.4	573.3	609.1	644.9	680.7
40								357.40	397.08	436.76	476.4	516.1	555.8	595.5	635.2	674.8	714.5	754.2
42									437.75	481.50	525.2	569.0	612.7	656.5	700.2	744.0	787.7	831.5
44										528.42	576.4	624.4	672.5	720.5	768.5	816.5	864.5	912.5
46											630.0	682.5	735.0	787.4	839.9	892.4	944.9	997.3
48												743.1	800.2	857.4	914.5	971.6	1028.8	1085.9
50												806.3	868.3	930.3	992.3	1054.3	1116.3	1178.3
52														1006.2	1073.2	1140.3	1207.3	1274.4
54															1157.3	1229.7	1302.0	1374.4
56																	1400.2	1478.0

Data collected by destructive sampling of 368 trees in accessible locations of the Yukon.
Table shows total weight of bole wood inside bark (kilograms). Height shown is tree height (metres);
DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{wood} = 0.2770 + 0.01240D^2H$$

$$R^2 = 0.9815 \quad SEE = 0.7329$$

TABLE B8. OVEN DRY WEIGHT TABLE FOR WHITE SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF BOLE BARK (KILOGRAMS)

HEIGHT(M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
4			0.40	0.46														
6				0.85	0.99	1.12												
8	0.65				1.63	1.88	2.13	2.37										
10	0.92						3.24	3.63	4.01									
12	1.26	1.82						5.15	5.71	6.27								
14	1.66	2.42					6.20	6.96	7.72	8.47								
16	2.13	3.12							10.01	11.02	12.0							
18		3.90	5.15						12.66	13.91	15.2	16.4	17.7					
20		4.78	6.33	7.87					15.59	17.14	18.7	20.2	21.8	23.3				
22			7.62	9.49											30.0			
24				11.27	13.49										35.7			
26					15.81	18.42									41.9			
28					18.31	21.33									48.6	51.6		
30					21.00	24.47										59.2	62.7	
32					23.87	27.82										67.3	71.3	
34					26.92	31.39	35.85									76.0	80.5	
36						35.17	40.17										90.2	95.2
38							44.74	50.32	55.89	61.46							100.5	106.1
40								55.74	61.91	68.09								117.5
42									68.24	75.05								129.5
44										82.35	89.8							
46											98.2	106.3	114.5	122.7				
48												115.8	124.7	133.6				
50												125.6	135.3	144.9				
52														156.7	167.2	177.6		
54															180.2	191.5	202.8	
56																	218.0	230.1

Data collected by destructive sampling of 368 trees in accessible locations of the Yukon.
Table shows total weight of bole bark (kilograms). Height shown is tree height (metres);
DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{bark} = 0.1506 + 0.00193D^2H$$

$R^2 = 0.9131$ SEE = 0.2551

TABLE B9. OVEN DRY WEIGHT TABLE FOR WHITE SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF BRANCHES (KILOGRAMS)

HEIGHT(M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
4	0.33	0.37	0.40	0.44														
6	0.42	0.51	0.60	0.68	0.77	0.85												
8	0.56	0.71	0.86	1.01	1.17	1.32	1.47	1.62										
10	0.73	0.97	1.20	1.44	1.68	1.92	2.16	2.39	2.63									
12	0.94	1.28	1.62	1.97	2.31	2.65	2.99	3.34	3.68	4.02								
14	1.19	1.65	2.12	2.58	3.05	3.52	3.98	4.45	4.92	5.38								
16	1.47	2.08	2.68	3.30	3.91	4.52	5.13	5.74	6.34	6.95	7.6							
18		2.57	3.34	4.11	4.88	5.65	6.42	7.19	7.96	8.73	9.5	10.3	11.0					
20		3.11	4.06	5.01	5.96	6.92	7.87	8.82	9.77	10.72	11.7	12.6	13.6	14.5				
22			4.86	6.01	7.16	8.32	9.47	10.62	11.77	12.92	14.1	15.2	16.4	17.5	18.7			
24				7.11	8.48	9.85	11.22	12.59	13.96	15.33	16.7	18.1	19.4	20.8	22.2			
26					9.91	11.51	13.12	14.73	16.34	17.95	19.6	21.2	22.8	24.4	26.0			
28					11.45	13.31	15.18	17.05	18.91	20.78	22.6	24.5	26.4	28.2	30.1	32.0		
30					13.10	15.25	17.39	19.53	21.67	23.81	26.0	28.1	30.2	32.4	34.5	36.7	38.8	
32					14.88	17.31	19.75	22.19	24.62	27.06	29.5	31.9	34.4	36.8	39.2	41.7	44.1	
34					16.76	19.51	22.26	25.01	27.76	30.52	33.3	36.0	38.8	41.5	44.3	47.0	49.8	
36						21.84	24.93	28.01	31.10	34.18	37.3	40.4	43.4	46.5	49.6	52.7	55.8	58.9
38							27.75	31.18	34.62	38.06	41.5	44.9	48.4	51.8	55.2	58.7	62.1	65.5
40								34.52	38.33	42.14	45.9	49.8	53.6	57.4	61.2	65.0	68.8	72.6
42									42.24	46.43	50.6	54.8	59.0	63.2	67.4	71.6	75.8	80.0
44										50.94	55.5	60.2	64.3	69.4	74.0	78.6	83.2	87.8
46											60.7	65.7	70.8	75.8	80.8	85.9	90.9	95.9
48												71.5	77.0	82.5	88.0	93.5	99.0	104.4
50												77.6	83.6	89.5	95.5	101.4	107.4	113.3
52														96.8	103.2	109.7	116.1	122.5
54															111.3	118.2	125.2	132.1
56																	134.6	142.1

Data collected by destructive sampling of 368 trees in accessible locations of the Yukon.
Table shows total weight of branches (kilograms). Height shown is tree height (metres);
DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{Br.} = 0.2519 + 0.001191D^2H$$

$$R^2 = 0.6196 \quad SEE = 0.4002$$

TABLE B10. OVEN DRY WEIGHT TABLE FOR WHITE SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF TWIGS AND FOLIAGE (KILOGRAMS)

HEIGHT(M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
4	1.08	1.16	1.23	1.31														
6	1.27	1.45	1.62	1.79	1.97	2.14												
8	1.54	1.85	2.16	2.47	2.78	3.09	3.39	3.70										
10	1.89	2.37	2.85	3.34	3.82	4.30	4.78	5.26	5.75									
12	2.31	3.01	3.70	4.40	5.09	5.78	6.48	7.17	7.87	8.56								
14	2.82	3.76	4.71	5.65	6.59	7.54	8.48	9.43	10.37	11.32								
16	3.39	4.63	5.86	7.10	8.33	9.56	10.80	12.03	13.27	14.50	15.7							
18		5.61	7.17	8.73	10.30	11.86	13.42	14.98	16.54	18.10	19.7	21.2	22.8					
20		6.71	8.64	10.57	12.49	14.42	16.35	18.28	20.21	22.13	24.1	26.0	27.9	29.8				
22			10.26	12.59	14.92	17.26	19.59	21.92	24.25	26.59	28.9	31.3	33.6	35.9	38.3			
24				14.81	17.58	20.36	23.14	25.91	28.69	31.47	34.2	37.0	39.8	42.6	45.3			
26					20.48	23.73	26.99	30.25	33.51	36.77	40.0	43.3	46.5	49.8	53.1			
28					23.60	27.38	31.16	34.94	38.71	42.49	46.3	50.1	53.8	57.6	61.4	65.2		
30					26.95	31.29	35.63	39.97	44.31	48.64	53.0	57.3	61.7	66.0	70.3	74.7	79.0	
32					30.54	35.48	40.41	45.35	50.28	55.22	60.2	65.1	70.0	75.0	79.9	84.8	89.8	
34					34.36	39.93	45.50	51.07	56.65	62.22	67.8	73.4	78.9	84.5	90.1	95.6	101.2	
36						44.65	50.90	57.15	63.39	69.64	75.9	82.1	88.4	94.6	100.9	107.1	113.1	119.6
38							56.61	63.57	70.53	77.49	84.4	91.4	98.4	105.3	112.3	119.2	126.2	133.2
40								70.33	78.05	85.76	93.5	101.2	108.9	116.6	124.3	132.0	139.7	147.5
42									85.95	94.45	103.0	111.5	120.0	128.5	137.0	145.5	154.0	162.5
44										103.57	112.9	122.2	131.6	140.9	150.2	159.6	168.9	178.2
46											123.3	133.5	143.7	153.9	164.1	174.3	184.5	194.7
48												145.3	156.4	167.5	178.6	189.7	200.8	211.9
50												157.6	169.6	181.7	193.7	205.8	217.8	229.9
52														196.4	209.5	222.5	235.5	248.6
54															225.8	239.9	253.9	268.0
56																	273.0	288.1

Data collected by destructive sampling of 368 trees in accessible locations of the Yukon.
Table shows total weight of twigs and foliage (kilograms). Height shown is tree height (metres);
DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{TFol} = 0.9265 + 0.00241D^2H$$

$$R^2 = 0.5028 \quad SEE = 1.0276$$

TABLE B11. OVEN DRY WEIGHT TABLE FOR WHITE SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF TOTAL TREE COMPONENTS (KILOGRAMS)

HEIGHT(M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38
4	2.80	3.51	4.11	4.72														
6	4.81	5.77	7.15	8.50	9.86	11.22												
8	6.53	8.98	11.37	13.79	16.21	18.63	21.04	23.46										
10	9.25	13.03	16.81	20.59	24.37	28.15	31.93	35.71	39.49									
12	12.58	18.02	23.46	28.91	34.35	39.79	45.24	50.68	56.12	61.57								
14	16.51	23.92	31.33	38.74	46.14	53.55	60.96	68.37	75.78	83.19								
16	21.05	30.72	40.40	50.08	59.75	69.43	79.11	88.78	98.46	108.14	117.8							
18		38.43	50.68	62.93	75.17	87.42	99.67	111.92	124.16	136.41	148.7	160.9	173.2					
20		47.05	62.17	77.29	92.41	107.53	122.65	137.77	152.89	168.01	183.1	198.3	213.4	228.5				
22			74.87	93.17	111.46	129.76	148.05	166.35	184.64	202.94	221.2	239.5	257.8	276.1	294.4			
24				110.56	132.33	154.10	175.87	197.65	219.42	241.19	263.0	284.7	306.5	328.3	350.1			
26					155.01	180.56	206.11	231.67	257.22	282.77	308.3	333.9	359.4	385.0	410.5			
28					179.50	209.14	238.77	268.41	298.04	327.68	357.3	386.9	416.6	446.2	475.9	505.5		
30					205.81	239.83	273.85	307.87	341.89	375.91	409.9	444.0	478.0	512.0	546.0	580.0	614.1	
32					233.93	272.64	311.35	350.06	388.76	427.47	466.2	504.9	543.6	582.3	621.0	659.7	698.4	
34					263.87	307.57	351.27	394.96	438.66	482.36	526.1	569.7	613.4	657.1	700.8	744.5	788.2	
36						344.61	393.60	442.59	491.58	540.57	589.6	638.5	687.5	736.5	785.5	834.5	883.5	932.5
38							438.36	492.94	547.52	602.11	656.7	711.3	765.9	820.4	875.0	929.6	984.2	1038.8
40								546.01	606.49	666.97	727.5	787.9	848.4	908.8	969.4	1029.9	1090.3	1150.8
42									668.48	735.16	801.8	868.5	935.2	1001.9	1068.6	1135.3	1201.9	1268.6
44										806.68	879.9	953.0	1026.2	1099.4	1172.6	1245.8	1318.9	1392.1
46											961.5	1041.5	1121.5	1201.5	1281.4	1361.4	1441.3	1521.3
48												1133.9	1221.0	1308.1	1395.2	1482.2	1569.3	1656.4
50												1230.2	1324.7	1419.2	1513.7	1608.2	1702.7	1797.2
52														1534.9	1637.1	1739.3	1841.5	1943.7
54															1765.3	1875.5	1985.7	2095.9
56																	2135.4	2254.0

Data collected by destructive sampling of 368 trees in accessible locations of the Yukon.
Table shows total weight of total tree components (kilogram). Height shown is tree height (metres);
DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$D_{WTot} = 1.6914 + 0.01891D^2H$$

$$R^2 = 0.9479 \quad SEE = 1.9029$$

* Includes Green Weight dead.

TABLE B12. GREEN WEIGHT TABLE FOR LODGEPOLE PINE (ALL AGES)
YUKON TERRITORY
WEIGHT OF BOLE WOOD (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26
4	4.34	5.26	6.19	7.11	8.03							
6	6.65	8.73	10.81	12.89	14.97	17.05						
8	9.88	13.58	17.28	20.98	24.68	28.38	32.08					
10	14.05	19.83	25.61	31.39	37.17	42.95	48.73	54.51				
12	19.13	27.46	35.78	44.10	52.43	60.75	69.07	77.39	85.72			
14		36.47	47.80	59.13	70.46	81.79	93.12	104.45	115.77	127.10		
16		46.88	61.67	76.47	91.27	106.06	120.86	135.66	150.45	165.25	180.0	
18			77.39	96.12	114.85	133.58	152.30	171.03	189.76	208.49	227.2	245.9
20				118.09	141.21	164.33	187.45	210.57	233.69	256.81	279.9	303.0
22				142.36	170.34	198.31	226.29	254.26	282.24	310.21	338.2	366.2
24				168.95	202.24	235.54	268.83	302.12	335.41	368.71	402.0	435.3
26				197.85	236.92	276.00	315.07	354.14	393.21	432.29	471.4	510.4
28				229.06	274.38	319.69	365.01	410.32	455.64	500.95	546.3	591.6
30				262.59	314.61	366.63	418.65	470.67	522.69	574.71	626.7	678.7
32				298.42	357.61	416.80	475.98	535.17	594.36	653.55	712.7	771.9
34					403.39	470.20	537.02	603.84	670.65	737.47	804.3	871.1
36						526.85	601.76	676.67	751.57	826.48	901.4	
38								753.65	837.12	920.58		

Data collected by destructive sampling of 149 trees in accessible locations of the Yukon. Table shows total weight of bole wood inside bark (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Wood} = 2.4865 + 0.02894D^2H$$

$$R^2 = 0.9860 \quad SEE = 5.9747$$

TABLE B13. GREEN WEIGHT TABLE FOR LODGEPOLE PINE (ALL AGES)
YUKON TERRITORY
WEIGHT OF BOLE BARK (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26
4	1.12	1.21	1.31	1.41	1.50							
6	1.36	1.58	1.79	2.01	2.23	2.45						
8	1.70	2.08	2.47	2.86	3.24	3.63	4.02					
10	2.13	2.73	3.34	3.94	4.55	5.15	5.75	6.36				
12	2.66	3.53	4.40	5.27	6.14	7.01	7.88	8.75	9.62			
14		4.47	5.66	6.84	8.03	9.21	10.39	11.58	12.76	13.95		
16		5.56	7.11	8.65	10.20	11.75	13.29	14.84	16.39	17.93	19.5	
18			8.75	10.71	12.66	14.62	16.58	18.54	20.49	22.45	24.4	26.4
20				13.00	15.42	17.83	20.25	22.67	25.08	27.50	29.9	32.3
22				15.54	18.46	21.39	24.31	27.23	30.16	33.08	36.0	38.9
24				18.32	21.80	25.28	28.76	32.23	35.71	39.19	42.7	46.2
26				21.34	25.42	29.50	33.59	37.67	41.75	45.84	49.9	54.0
28				24.60	29.34	34.07	38.81	43.54	48.28	53.01	57.7	62.5
30				28.10	33.54	38.97	44.41	49.85	55.28	60.72	66.2	71.6
32				31.85	38.03	44.22	50.40	56.59	62.77	68.96	75.1	81.3
34					42.82	49.80	56.78	63.76	70.75	77.73	84.7	91.7
36						55.72	63.55	71.37	79.20	87.03	94.9	
38								79.42	88.14	96.86		

Data collected by destructive sampling of 149 trees in accessible locations of the Yukon. Table shows total weight of bole bark (kilograms).
Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Bark} = 0.9234 + 0.00302D^2H$$

$$R^2 = 0.9453 \text{ SEE} = 1.2574$$

TABLE B14. GREEN WEIGHT TABLE FOR LODGEPOLE PINE (ALL AGES)
YUKON TERRITORY
WEIGHT OF BRANCHES (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26
4	0.65	0.76	0.88	0.99	1.10							
6	0.93	1.19	1.44	1.70	1.95	2.21						
8	1.33	1.78	2.23	2.69	3.14	3.59	4.04					
10	1.84	2.54	3.25	3.96	4.66	5.37	6.07	6.78				
12	2.46	3.48	4.49	5.51	6.53	7.54	8.56	9.58	10.59			
14		4.58	5.96	7.34	8.73	10.11	11.50	12.88	14.26	15.65		
16		5.85	7.66	9.46	11.27	13.08	14.88	16.69	18.50	20.31	22.1	
18			9.58	11.86	14.15	16.44	18.73	21.01	23.30	25.59	27.9	30.2
20				14.55	17.37	20.19	23.02	25.84	28.67	31.49	34.3	37.1
22				17.51	20.93	24.35	27.76	31.18	34.60	38.01	41.4	44.8
24				20.76	24.83	28.89	32.96	37.03	41.09	45.16	49.2	53.3
26				24.29	29.06	33.83	38.61	43.38	48.15	52.92	57.7	62.5
28				28.10	33.64	39.17	44.71	50.24	55.78	61.31	66.8	72.4
30				32.20	38.55	44.90	51.26	57.61	63.97	70.32	76.7	83.0
32				36.57	43.80	51.03	58.26	65.49	72.72	79.95	87.2	94.4
34					49.39	57.56	65.72	73.88	82.04	90.20	98.4	106.5
36						64.47	73.62	82.77	91.92	101.07	110.2	
38								92.18	102.37	112.57		

Data collected by destructive sampling of 149 trees in accessible locations of the Yukon. Table shows total weight of branches (kilograms).
Height shown is tree height (metres); DBH is diameter at breast height (centimeters) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Br.} = 0.4259 + 0.00353D^2H$$

$R^2 = 0.7123$ SEE = 3.8840

TABLE B15. GREEN WEIGHT TABLE FOR LODGEPOLE PINE (ALL AGES) YUKON TERRITORY
WEIGHT OF TWIGS AND FOLIAGE (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26
4	2.89	3.00	3.10	3.21	3.32							
6	3.16	3.40	3.64	3.88	4.11	4.35						
8	3.53	3.95	4.38	4.80	5.23	5.65	6.08					
10	4.01	4.67	5.34	6.00	6.66	7.33	7.99	8.66				
12	4.59	5.55	6.50	7.46	8.42	9.37	10.33	11.29	12.24			
14		6.58	7.89	9.19	10.49	11.79	13.09	14.39	15.69	17.00		
16		7.78	9.48	11.18	12.88	14.58	16.28	17.98	19.68	21.38	23.1	
18			11.29	13.44	15.59	17.74	19.89	22.04	24.19	26.34	28.5	30.6
20				15.96	18.62	21.27	23.93	26.58	29.24	31.90	34.6	37.2
22				18.75	21.96	25.18	28.39	31.60	34.82	38.03	41.2	44.5
24				21.80	25.63	29.45	33.28	37.10	40.93	44.75	48.6	52.4
26				25.12	29.61	34.10	38.59	43.08	47.57	52.06	56.5	61.0
28				28.71	33.91	39.12	44.33	49.53	54.74	59.94	65.1	70.4
30				32.56	38.54	44.51	50.49	56.46	62.44	68.42	74.4	80.4
32				36.68	43.48	50.28	57.07	63.87	70.67	77.47	84.3	91.1
34					48.74	56.41	64.09	71.76	79.44	87.11	94.8	102.5
36						62.92	71.52	80.13	88.73	97.34	105.9	
38								88.97	98.56	108.15		

Data collected by destructive sampling of 149 trees in accessible locations of the Yukon. Table shows total weight of twigs and foliage (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{TFol} = 2.6805 + 0.003319D^2H$$

$$R^2 = 0.6121 \qquad SEE = 4.5716$$

TABLE B16. GREEN WEIGHT TABLE FOR LODGEPOLE PINE (ALL AGES)
YUKON TERRITORY
AIR DRY WEIGHT OF DEAD BRANCHES (KILOGRAMS)

HEIGHT(M) DBH (CM)	4	6	8	10	12	14	16	18	20	22	24	26
4	0	0	0	0	0							
6	0	0	0.04	0.15	0.26	0.36						
8	0	0.19	0.38	0.57	0.76	0.95	1.14					
10	0.21	0.51	0.81	1.10	1.40	1.70	2.00	2.30				
12	0.47	0.90	1.33	1.76	2.19	2.62	3.05	3.48	3.90			
14		1.37	1.95	2.53	3.12	3.70	4.29	4.87	5.45	6.04		
16		1.90	2.67	3.43	4.19	4.95	5.72	6.48	7.24	8.01	8.8	
18			3.48	4.44	5.41	6.37	7.34	8.30	9.27	10.23	11.2	12.2
20				5.57	6.77	7.96	9.15	10.34	11.53	12.73	13.9	15.1
22				6.83	8.27	9.71	11.15	12.59	14.04	15.48	16.9	18.4
24				8.20	9.91	11.63	13.35	15.06	16.78	18.49	20.2	21.9
26				9.69	11.70	13.71	15.73	17.74	19.76	21.77	23.8	25.8
28				11.30	13.63	15.97	18.30	20.64	22.98	25.31	27.7	30.0
30				13.02	15.71	18.39	21.07	23.75	26.43	29.12	31.8	34.5
32				14.87	17.92	20.97	24.03	27.08	30.13	33.18	36.2	39.3
34					20.28	23.73	27.17	30.62	34.06	37.51	41.0	44.4
36						26.65	30.51	34.37	38.23	42.10	46.0	
38								38.34	42.64	46.95		

Data collected by destructive sampling of 149 trees in accessible locations of the Yukon.
Tables total weight of dead branches (kilograms). Height shown is tree height (metres);
DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Dead} = -0.3864 + 0.00149D^2H$$

$$R^2 = 0.5977 \qquad SEE = 2.1210$$

TABLE B17. GREEN WEIGHT TABLE FOR LODGEPOLE PINE (ALL AGES)
YUKON TERRITORY
WEIGHT OF TOTAL TREE COMPONENTS (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26
4	8.71	10.00	11.29	12.58	13.87							
6	11.93	14.83	17.74	20.64	23.54	26.44						
8	16.45	21.61	26.76	31.92	37.08	42.24	47.40					
10	22.25	30.31	38.37	46.43	54.49	62.55	70.61	78.67				
12	29.34	40.95	52.56	64.16	75.77	87.37	98.98	110.59	122.19			
14		53.52	69.32	85.12	100.92	116.71	132.51	148.31	164.11	179.90		
16		68.03	88.66	109.30	129.93	150.57	171.20	191.83	212.47	233.10	253.7	
18			110.59	136.70	162.82	188.93	215.05	241.16	267.27	293.39	319.5	345.6
20				167.33	199.57	231.81	264.05	296.29	328.53	360.77	393.0	425.3
22				201.18	240.19	279.20	318.21	357.22	396.23	435.24	474.3	513.3
24				238.26	284.68	331.11	377.53	423.96	470.39	516.81	563.2	609.7
26				278.56	333.04	387.53	442.01	496.50	550.99	605.47	660.0	714.4
28				322.08	385.27	448.46	511.65	574.84	638.03	701.22	764.4	827.6
30				368.83	441.37	513.91	586.45	658.99	731.53	804.07	876.6	949.2
32				418.80	501.34	583.87	666.41	748.94	831.47	914.01	996.5	1079.1
34					565.17	658.35	751.52	844.69	937.87	1031.04	1124.2	1217.4
36						737.33	841.79	946.25	1050.71	1155.16	1259.6	
38								1053.61	1169.99	1286.38		

Data collected by destructive sampling of 149 trees in accessible locations of the Yukon.
Table shows total weight of total tree components (kilograms).
Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Tot} = 6.1298 + 0.04031D^2H$$

$$R^2 = 0.9785 \qquad SEE = 10.3402$$

TABLE B18. OVEN DRY WEIGHT TABLE FOR LODGEPOLE PINE (ALL AGES)
YUKON TERRITORY
WEIGHT OF BOLE WOOD (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26
4	1.64	2.14	2.64	3.14	3.64							
6	2.89	4.02	5.15	6.28	7.41	8.54						
8	4.65	6.66	8.67	10.68	12.69	14.70	16.71					
10	6.91	10.05	13.19	16.33	19.47	22.61	25.75	28.89				
12	9.67	14.20	18.72	23.24	27.76	32.28	36.80	41.32	45.85			
14		19.09	25.25	31.40	37.56	43.71	49.87	56.02	62.17	68.33		
16		24.75	32.78	40.82	48.86	56.90	64.94	72.98	81.01	89.05	97.1	
18			41.32	51.50	61.67	71.85	82.02	92.19	102.37	112.54	122.7	132.9
20				63.43	75.99	88.55	101.11	113.67	126.23	138.79	151.4	163.9
22				76.62	91.82	107.01	122.21	137.41	152.61	167.80	183.0	198.2
24				91.06	109.15	127.23	145.32	163.41	181.49	199.58	217.7	235.8
26				106.76	127.99	149.21	170.44	191.67	212.89	234.12	255.3	276.6
28				123.72	148.34	172.95	197.57	222.19	246.81	271.42	296.0	320.7
30				141.93	170.19	198.45	226.71	254.97	283.23	311.49	339.8	368.0
32				161.40	193.55	225.71	257.86	290.01	322.17	354.32	386.5	418.6
34					218.42	254.72	291.02	327.32	363.61	399.91	436.2	472.5
36						285.49	326.19	366.88	407.57	448.27	489.0	
38								408.70	454.05	499.39		

Data collected by destructive sampling of 149 trees in accessible locations of the Yukon. Table shows total weight of bole wood inside bark (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{Wood} = 0.6301 + 0.01568D^2H$$

$$R^2 = 0.9840 \quad SEE = 3.4597$$

TABLE B19. OVEN DRY WEIGHT TABLE FOR LODGEPOLE PINE (ALL AGES)
YUKON TERRITORY
WEIGHT OF BOLE BARK (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26
4	0.40	0.45	0.50	0.55	0.60							
6	0.53	0.64	0.75	0.86	0.97	1.08						
8	0.70	0.89	1.09	1.29	1.48	1.68	1.87					
10	0.92	1.22	1.53	1.84	2.14	2.45	2.75	3.06				
12	1.18	1.63	2.07	2.51	2.95	3.39	3.83	4.27	4.71			
14		2.11	2.71	3.31	3.91	4.50	5.10	5.70	6.30	6.90		
16		2.66	3.44	4.22	5.01	5.79	6.57	7.36	8.14	8.92	9.7	
18			4.27	5.26	6.26	7.25	8.24	9.23	10.22	11.21	12.2	13.2
20				6.43	7.65	8.87	10.10	11.32	12.55	13.77	15.0	16.2
22				7.71	9.19	10.67	12.15	13.64	15.12	16.60	18.1	19.6
24				9.12	10.88	12.64	14.41	16.17	17.93	19.69	21.5	23.2
26				10.65	12.72	14.79	16.85	18.92	20.99	23.06	25.1	27.2
28				12.30	14.70	17.10	19.50	21.90	24.30	26.70	29.1	31.5
30				14.08	16.83	19.58	22.34	25.09	27.85	30.60	33.4	36.1
32				15.97	19.10	22.24	25.37	28.51	31.64	34.77	37.9	41.0
34					21.53	25.07	28.60	32.14	35.68	39.22	42.8	46.3
36						28.07	32.03	36.00	39.96	43.93	47.9	
38								40.07	44.49	48.91		

Data collected by destructive sampling of 149 trees in accessible locations of the Yukon. Table shows total weight of bole bark (kilograms).
Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{Bark} = 0.306^{d} + 0.00153D^{2}H$$

$$R^{2} = 0.9408 \quad SEE = 0.6626$$

TABLE B20. OVEN DRY TABLE FOR LODGEPOLE PINE (ALL AGES)
YUKON TERRITORY
WEIGHT OF BRANCHES (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26
4	0.37	0.42	0.48	0.53	0.59							
6	0.51	0.63	0.75	0.87	1.00	1.12						
8	0.70	0.91	1.13	1.35	1.57	1.78	2.00					
10	0.94	1.28	1.62	1.96	2.30	2.64	2.98	3.32				
12	1.24	1.73	2.22	2.71	3.20	3.69	4.18	4.67	5.16			
14		2.26	2.93	3.59	4.26	4.93	5.59	6.26	6.93	7.59		
16		2.87	3.74	4.61	5.48	6.35	7.22	8.09	8.97	9.84	10.7	
18			4.67	5.77	6.87	7.97	9.07	10.18	11.28	12.38	13.5	14.6
20				7.06	8.42	9.78	11.14	12.50	13.86	15.22	16.6	17.9
22				8.49	10.14	11.78	13.43	15.07	16.72	18.36	20.0	21.7
24				10.05	12.01	13.97	15.93	17.89	19.84	21.80	23.8	25.7
26				11.75	14.05	16.35	18.65	20.95	23.25	25.54	27.8	30.1
28				13.59	16.26	18.92	21.59	24.25	26.92	29.58	32.2	34.9
30				15.56	18.62	21.68	24.74	27.80	30.86	33.92	37.0	40.0
32				17.67	21.15	24.63	28.11	31.60	35.08	38.56	42.0	45.5
34					23.84	27.77	31.70	35.63	39.57	43.50	47.4	51.4
36						31.11	35.51	39.92	44.33	48.73	53.1	
38								44.45	49.36	54.27		

Data collected by destructive sampling of 149 trees in accessible locations of the Yukon. Table shows total weight of branches (kilograms).
Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{Br.} = 0.2614 + 0.00171D^2H$$

$$R^2 = 0.6489 \quad SEE = 2.1667$$

TABLE B21. OVEN DRY WEIGHT TABLE FOR LODGEPOLE PINE (ALL AGES)
YUKON TERRITORY
WEIGHT OF TWIGS AND FOLIAGE (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24	26
4	2.19	1.24	1.28	1.33	1.37							
6	1.31	1.41	1.51	1.61	1.71	1.82						
8	1.47	1.65	1.83	2.01	2.19	2.37	2.56					
10	1.67	1.95	2.24	2.52	2.81	3.09	3.37	3.66.				
12	1.92	2.33	2.74	3.15	3.56	3.96	4.37	4.78				
14		2.77	3.33	3.88	4.44	5.00	5.55	6.11	6.67	7.22		
16		3.28	4.01	4.74	5.46	6.19	6.92	7.64	8.37	9.10	9.8	
18			4.78	5.70	6.62	7.54	8.46	9.38	10.30	11.22	12.1	13.1
20				6.78	7.92	9.05	10.19	11.32	12.46	13.60	14.7	15.9
22				7.97	9.35	10.72	12.10	13.47	14.85	16.22	17.6	19.0
24				9.28	10.92	12.55	14.19	15.82	17.46	19.10	20.7	22.4
26				10.70	12.62	14.54	16.46	18.38	20.30	22.22	24.1	26.1
28				12.23	14.46	16.69	18.91	21.14	23.37	25.59	27.8	30.0
30				13.88	16.44	18.99	21.55	24.10	26.64	29.22	31.8	34.3
32				15.64	18.55	21.46	24.37	27.27	30.18	33.09	36.0	38.9
34					20.80	24.08	27.37	30.65	33.93	37.21	40.5	43.8
36						26.87	30.55	34.23	37.91	41.59	45.3	
38								38.01	42.11	46.21		

Data collected by destructive sampling of 149 trees in accessible locations of the Yukon. Table shows total weight of twigs and foliage (kilograms).
Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{TFol} = 1.1011 + 0.00142D^2H$$

$$R^2 = 0.5895 \quad SEE = 2.0513$$

TABLE B22. OVEN DRY WEIGHT TABLE FOR LODGEPOLE PINE (ALL AGES)
YUKON TERRITORY
WEIGHT OF TOTAL TREE COMPONENTS (KILOGRAMS)

HEIGHT (M) DBH (CM)	4	6	8	10	12	14	16	18	20	22	24	26
4	3.29	3.99	4.69	5.39	6.09							
6	5.04	6.61	8.18	9.76	11.33	12.90						
8	7.48	10.28	13.07	15.53	18.66	21.46	24.25					
10	10.63	14.99	19.36	23.73	28.09	32.46	36.82	41.19				
12	14.47	20.76	27.04	33.33	39.62	45.91	52.19	58.48	64.77			
14		27.57	36.13	44.68	53.24	61.80	70.35	78.91	87.47	96.03		
16		35.43	46.60	57.78	68.96	80.13	91.31	102.49	113.67	124.84	136.02	
18			58.48	72.63	86.77	100.92	115.06	129.21	143.35	157.50	171.65	185.8
20				89.22	106.68	124.14	141.61	159.07	176.54	194.00	211.46	228.9
22				107.55	128.68	149.82	170.95	192.08	213.21	234.34	255.47	276.6
24				127.64	152.79	177.93	203.08	228.23	253.38	278.53	303.67	328.8
26				149.47	178.98	208.50	238.01	267.52	297.04	326.55	356.07	385.6
28				173.04	207.27	241.50	275.73	309.96	344.19	378.42	412.65	446.9
30				198.37	237.66	276.95	316.25	355.54	394.84	434.13	473.42	512.7
32				225.44	270.14	314.85	359.56	404.27	448.97	493.68	538.39	583.1
34					304.72	355.19	405.66	456.13	506.61	557.08	607.55	658.0
36						397.98	454.56	511.15	567.73	624.31	680.90	
38								569.30	632.35	695.39		

Data collected by destructive sampling of 149 trees in accessible locations of the Yukon. Table shows total weight of total tree components (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{Tot} = 1.8962 + 0.02183D^2H$$

$$R^2 = 0.9811 \quad SEE = 5.2402$$

*Includes green weight dead branches

TABLE B23. GREEN WEIGHT TABLE FOR BLACK SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF BOLE WOOD (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24
4	2.42	3.27	4.12	4.96							
6	4.54	6.45	8.36	10.26	12.17						
8	7.51	10.90	14.29	17.68	21.08	24.47					
10	11.32	16.62	21.92	27.22	32.52	37.82	43.12				
12	15.99	23.62	31.25	38.88	46.52	54.15	61.78	69.41	77.04		
14	21.50	31.89	42.28	52.66	63.05	73.44	83.83	94.22	104.60	114.99	
16		41.43	55.00	68.56	82.13	95.70	109.27	122.84	136.40	149.97	163.5
18		52.24	69.41	86.58	103.76	120.93	138.10	155.27	172.44	189.62	206.8
20		64.32	85.52	106.72	127.92	149.12	170.32	191.52	212.72	233.92	255.1
22			103.33	128.98	154.64	180.29	205.94	231.59	257.24	282.90	308.5
24				153.36	183.89	214.42	244.95	275.48	306.00	336.53	367.1
26					215.69	251.52	287.35	323.18	359.00	394.83	430.7
28						291.59	333.14	374.69	416.24	457.80	499.3
30							382.32	430.02	477.72	525.42	
32								489.17	543.44		

Data collected by destructive sampling of 302 trees in accessible locations of the Yukon. Table shows total weight of bole wood, inside bark (kg). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Wood} = 0.7238 + 0.02646D^2H$$

$$R^2 = 0.9762 \quad SEE = 1.1528$$

TABLE B24. GREEN WEIGHT TABLE FOR BLACK SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF BOLE BARK (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24
4	0.69	0.85	1.02	1.18							
6	1.10	1.47	1.84	2.21	2.58						
8	1.68	2.34	3.00	3.66	4.32	4.97					
10	2.42	3.45	4.48	5.51	6.54	7.57	8.60				
12	3.33	4.81	6.29	7.78	9.26	10.74	12.23	13.71	15.19		
14	4.40	6.42	8.44	10.45	12.47	14.49	16.51	18.53	20.55	22.57	
16		8.27	10.91	13.54	16.18	18.82	21.45	24.09	26.73	29.36	32.0
18		10.37	13.71	17.05	20.38	23.72	27.06	30.39	33.73	37.07	40.4
20		12.72	16.84	20.96	25.08	29.20	33.32	37.44	41.56	45.68	49.8
22			20.30	25.29	30.27	35.26	40.24	45.23	50.21	55.20	60.2
24				30.02	35.96	41.89	47.82	53.76	59.69	65.62	71.6
26					42.14	49.10	56.06	63.03	69.99	76.95	83.9
28						56.89	64.96	73.04	81.11	89.19	97.3
30							74.52	83.79	93.06	102.33	
32								95.28	105.83		

Data collected by destructive sampling of 302 trees in accessible locations of the Yukon. Table shows total weight of bole bark (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Bark} = 0.3603 + 0.00516D^2H$$

$$R^2 = 0.9241 \quad SEE = 04122$$

TABLE B25. GREEN WEIGHT TABLE FOR BLACK SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF BRANCHES (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24
4	0.64	0.72	0.80	0.88							
6	0.84	1.01	1.19	1.37	1.55						
8	1.11	1.43	1.75	2.07	2.38	2.70					
10	1.47	1.97	2.46	2.96	3.46	3.95	4.45				
12	1.91	2.62	3.34	4.05	4.76	5.48	6.19	6.91	7.62		
14	2.42	3.40	4.37	5.34	6.31	7.28	8.26	9.23	10.20	11.17	
16		4.29	5.56	6.83	8.10	9.37	10.64	11.91	13.18	14.45	15.7
18		5.30	6.91	8.51	10.12	11.73	13.34	14.94	16.55	18.16	19.8
20		6.43	8.41	10.40	12.38	14.37	16.35	18.34	20.30	22.30	24.3
22			10.08	12.48	14.88	17.28	19.68	22.08	24.49	26.89	29.3
24				14.76	17.62	20.48	23.33	26.19	29.05	31.91	34.8
26					20.60	23.95	27.30	30.66	34.01	37.36	40.7
28						27.70	31.59	35.48	39.37	43.25	47.1
30							36.19	40.65	45.12	49.58	
32								46.19	51.27		

Data collected by destructive sampling of 302 trees in accessible locations of the Yukon. Table shows total weight of branches (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Br.} = 0.4796 + 0.00248D^2H$$

$$R^2 = 0.5288 \qquad SEE = 0.6526$$

TABLE B26. GREEN WEIGHT TABLE FOR BLACK SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF TWIGS AND FOLIAGE (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24
4	2.29	2.51	2.73	2.95							
6	2.84	3.34	3.84	4.34	4.83						
8	3.62	4.50	5.39	6.27	7.16	8.04					
10	4.61	6.00	7.38	8.76	10.15	11.53	12.92				
12	5.83	7.82	9.82	11.81	13.80	15.79	17.79	19.78	21.77		
14	7.27	9.98	12.69	15.41	18.12	20.83	23.55	26.26	28.97	31.68	
16		12.47	16.02	19.56	23.10	26.65	30.19	33.73	37.27	40.82	44.4
18		15.30	19.78	24.26	28.75	33.23	37.72	42.20	46.69	51.17	55.7
20		18.45	23.99	29.52	35.06	40.60	46.13	51.67	57.20	62.74	68.3
22			28.64	35.34	42.04	48.73	55.43	62.13	68.83	75.53	82.2
24				41.70	49.68	57.65	65.62	73.59	81.56	89.53	97.5
26					57.98	67.33	76.69	86.05	95.40	104.76	114.1
28						77.80	88.65	99.50	110.35	121.20	132.1
30							101.49	113.95	126.40	138.86	
32								129.39	143.57		

Data collected by destructive sampling of 302 trees in accessible locations of the Yukon. Table shows total weight of twigs and foliage (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{TFol} = 1.8442 + 0.00693D^2H$$

$$R^2 = 0.4800 \quad SEE = 2.0119$$

TABLE B27. GREEN WEIGHT TABLE FOR BLACK SPRUCE (ALL AGES)
YUKON TERRITORY
AIR DRY WEIGHT OF DEAD BRANCHES (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24
4	0.18	0.25	0.32	0.38							
6	0.35	0.50	0.65	0.79	0.94						
8	0.58	0.84	1.11	1.37	1.63	1.90					
10	0.88	1.29	1.70	2.11	2.52	2.94	3.35				
12	1.24	1.83	2.43	3.02	3.61	4.21	4.80	5.39	5.99		
14	1.67	2.47	3.28	4.09	4.90	5.70	6.51	7.32	8.13	8.93	
16		3.22	4.27	5.33	6.38	7.44	8.49	9.54	10.60	11.65	12.7
18		4.06	5.39	6.73	8.06	9.40	10.73	12.07	13.40	14.74	16.1
20		5.00	6.64	8.29	9.94	11.59	13.24	14.88	16.53	18.18	19.8
22			8.03	10.02	12.02	14.01	16.00	18.00	19.99	21.99	24.0
24				11.92	14.29	16.66	19.04	21.41	23.78	26.16	28.5
26					16.76	19.55	22.33	25.12	27.90	30.69	33.5
28						22.66	25.89	29.12	32.35	35.58	38.8
30							29.72	33.42	37.13	40.84	
32								38.02	42.24		

Data collected by destructive sampling of 302 trees in accessible locations of the Yukon. Table shows total weight of dead branches (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Dead} = 0.0522 + 0.00206D^2H$$

$$R^2 = 0.6412 \qquad SEE = 0.4301$$

TABLE B28. GREEN WEIGHT TABLE FOR BLACK SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF TOTAL TREE COMPONENTS (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24
4	**6.22**	**7.60**	8.98	10.36							
6	**9.67**	**12.77**	**15.87**	18.98	22.08						
8	14.49	**20.01**	**25.53**	**31.04**	36.56	42.08					
10	20.70	**29.32**	**37.94**	**46.56**	**55.18**	63.80	72.42				
12	28.29	**40.70**	**53.11**	**65.52**	**77.94**	**90.35**	102.76	115.18	127.59		
14	37.25	54.15	**71.04**	**87.94**	**104.83**	**121.73**	**138.62**	155.52	172.41	189.31	
16		69.66	91.73	**113.80**	**135.86**	**157.93**	**180.00**	**202.06**	**224.13**	246.20	268.3
18		87.25	115.18	**143.10**	171.03	**198.96**	**226.89**	**254.82**	**282.75**	310.68	338.6
20		106.90	141.38	**175.86**	**210.34**	**244.82**	**279.30**	**313.78**	**348.26**	382.74	417.2
22			170.34	212.06	**253.78**	**295.51**	**337.23**	**378.95**	**420.67**	462.39	504.1
24				251.72	301.37	**351.02**	**400.67**	**450.32**	**499.97**	549.62	599.3
26					353.09	411.36	**469.63**	**527.90**	**586.17**	644.44	702.7
28						476.53	544.11	**611.69**	**679.27**	746.85	814.4
30							624.10	701.68	779.26	856.84	
32								797.88	886.15		

Data collected by destructive sampling of 302 trees in accessible locations of the Yukon. Table shows total weight of total tree components (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Tot} = 3.4601 + 0.04308D^2H$$

$$R^2 = 0.9191 \qquad SEE = 3.5660$$

TABLE B29. OVEN DRY WEIGHT TABLE FOR BLACK SPRUCE (ALL AGES) YUKON TERRITORY WEIGHT OF BOLE WOOD (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24
4	1.31	1.81	2.30	2.80							
6	2.55	3.67	4.78	5.90	7.01						
8	4.29	6.27	8.25	10.24	12.22	14.20					
10	6.52	9.62	12.72	15.82	18.92	22.02	25.12				
12	9.25	13.71	18.17	22.64	27.10	31.56	36.03	40.49	44.96		
14	12.47	18.55	24.62	30.70	36.77	42.85	48.92	55.00	61.08	67.15	
16		24.13	32.06	40.00	47.93	55.87	63.81	71.74	79.68	87.61	95.5
18		30.45	40.49	50.54	60.58	70.63	80.67	90.71	100.76	110.80	120.8
20		37.52	49.92	62.32	74.72	87.12	99.52	111.92	124.32	136.72	149.1
22			60.33	75.34	90.34	105.35	120.35	135.35	150.36	165.36	180.4
24				89.60	107.45	125.31	143.16	161.02	178.88	196.73	214.6
26					126.05	147.01	167.96	188.92	209.88	230.83	251.8
28						170.44	194.75	219.05	243.36	267.66	292.0
30							223.52	251.42	279.32	307.22	
32								286.01	317.76		

Data collected by destructive sampling of 302 trees in accessible locations of the Yukon. Table shows total weight of bole wood, inside bark (kg). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{Wood} = 0.3170 + 0.01550D^2H$$

$$R2 = 0.9810 \qquad SEE = 0.6043$$

TABLE B30. OVEN DRY WEIGHT TABLE FOR BLACK SPRUCE (ALL AGES) YUKON TERRITORY WEIGHT OF BOLE BARK (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24
4	0.35	0.44	0.53	0.62							
6	0.58	0.78	0.99	1.19	1.40						
8	0.90	1.26	1.62	1.99	2.35	2.71					
10	1.31	1.87	2.44	3.01	3.58	4.15	4.71				
12	1.81	2.62	3.44	4.26	5.08	5.90	6.71	7.53	8.35		
14	2.40	3.51	4.62	5.74	6.85	7.96	9.08	10.19	11.30	12.42	
16		4.53	5.99	7.44	8.89	10.35	11.80	13.26	14.71	16.16	17.6
18		5.69	7.53	9.37	11.21	13.05	14.89	16.73	18.57	20.41	22.3
20		6.99	9.26	11.53	13.80	16.07	18.35	20.62	22.89	25.16	27.4
22			11.17	13.92	16.67	19.41	22.16	24.91	27.66	30.41	33.2
24				16.53	19.80	23.07	26.34	29.62	32.89	36.16	39.4
26					23.21	27.05	30.89	34.73	38.57	42.41	46.2
28						31.34	35.79	40.25	44.70	49.15	53.6
30							41.07	46.18	51.29	56.40	
32								52.52	58.33		

Data collected by destructive sampling of 302 trees in accessible locations of the Yukon. Table shows total weight of bole bark (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{Bark} = 0.1696 + 0.00284D^2H$$

$$R^2 = 0.9298 \qquad SEE = 0.2178$$

TABLE B31. OVEN DRY WEIGHT TABLE FOR BLACK SPRUCE (ALL AGES) YUKON TERRITORY WEIGHT OF BRANCHES (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24
4	0.33	0.38	0.42	0.47							
6	0.44	0.55	0.65	0.75	0.86						
8	0.60	0.79	0.97	1.15	1.34	1.52					
10	0.81	1.10	1.38	1.67	1.95	2.24	2.53				
12	1.06	1.47	1.89	2.30	2.71	3.12	3.53	3.94	4.36		
14	1.36	1.92	2.48	3.04	3.60	4.16	4.72	5.28	5.84	6.40	
16		2.43	3.17	3.90	4.63	5.36	6.10	6.83	7.56	8.29	9.0
18		3.02	3.95	4.87	5.80	6.72	7.65	8.58	9.50	10.43	11.4
20		3.67	4.81	5.96	7.10	8.25	9.39	10.53	11.68	12.82	14.0
22			5.78	7.16	8.54	9.93	11.31	12.70	14.08	15.46	16.8
24				8.48	10.12	11.77	13.42	15.06	16.71	18.36	20.0
26					11.84	13.77	15.70	17.64	19.57	21.50	23.4
28						15.93	18.18	20.42	22.66	24.90	27.1
30							20.83	23.40	25.98	28.55	
32								26.60	29.52		

Data collected by destructive sampling of 302 trees in accessible locations of the Yukon. Table shows total weight of branches (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{Br.} = 0.2376 + 0.00143D^2H$$

$$R^2 = 0.4929 \qquad SEE = 0.4047$$

TABLE B32. OVEN DRY WEIGHT TABLE FOR BLACK SPRUCE (ALL AGES) YUKON TERRITORY WEIGHT OF TWIGS AND FOLIAGE (KILOGRAMS)

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24
4	1.07	1.18	1.28	1.38							
6	1.33	1.56	1.79	2.03	2.26						
8	1.69	2.10	2.52	2.93	3.34	3.75					
10	2.15	2.80	3.44	4.09	4.73	5.37	6.02				
12	2.72	3.65	4.58	5.50	6.43	7.36	8.28	9.21	10.14		
14	3.39	4.65	5.92	7.18	8.44	9.70	10.96	12.23	13.49	14.75	
16		5.81	7.46	9.11	10.76	12.41	14.06	15.70	17.35	19.00	20.6
18		7.13	9.21	11.30	13.39	15.47	17.56	19.65	21.73	23.82	25.9
20		8.59	11.17	13.75	16.32	18.90	21.47	24.05	26.63	29.20	31.8
22			13.33	16.45	19.57	22.68	25.80	28.92	32.04	35.15	38.3
24				19.41	23.12	26.83	30.54	34.25	37.96	41.67	45.4
26					26.99	31.34	35.69	40.05	44.40	48.75	53.1
28						36.21	41.26	46.31	51.36	56.40	61.5
30							47.23	53.03	58.83	64.62	
32								60.22	66.81		

Data collected by destructive sampling of 302 trees in accessible locations of the Yukon. Table shows total weight of twigs and foliage (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{TFol} = 0.8662 + 0.00322D^2H$$

$$R^2 = 0.4675 \qquad SEE = 0.9586$$

TABLE B33. OVEN DRY WEIGHT TABLE FOR BLACK SPRUCE (ALL AGES)
YUKON TERRITORY
WEIGHT OF TOTAL TREE COMPONENTS (KILOGRAMS)*

HEIGHT (M) DBH(CM)	4	6	8	10	12	14	16	18	20	22	24
4			4.86	5.66							
6				10.68	12.49						
8	8.07				20.92	24.13					
10	11.68					36.78	41.80				
12	16.10						59.47	66.70	73.93		
14	21.32	31.16						90.20	100.03	109.87	
16		40.20	53.05							143.01	155.9
18		50.44	66.70							180.56	196.8
20		61.88	81.96							222.52	242.6
22			98.83	123.13						268.91	293.2
24				146.22	175.13					319.71	348.6
26					205.25	239.19				374.93	408.9
28						277.14	316.50			434.57	473.9
30							363.08	408.26	453.44	498.62	
32								464.29	515.69		

Data collected by destructive sampling of 302 trees in accessible locations of the Yukon. Table shows total weight of total tree components (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{Tot} = 1.6426 + 0.02509D^2H$$

$$R^2 = 0.9476 \qquad SEE = 1.6439$$

* Includes green weight dead

TABLE B34. GREEN WEIGHT TABLE FOR TREMBLING ASPEN (ALL AGES)
YUKON TERRITORY
WEIGHT OF BOLE WOOD (KILOGRAMS)

HEIGHT (M) DBH (CM)	4	6	8	10	12	14	16	18	20	22	24
4			3.30	4.05	4.80						
6	3.68				10.42	12.10					
8	6.30					21.27	24.27				
10	9.67	14.35					37.75	42.43			
12	13.79	20.53						60.96			
14	18.65	27.83						82.86	92.04		
16		36.25	48.23						120.10		
18		45.80	60.96						151.90	167.10	
20		56.47	75.19							206.20	
22			90.91							249.50	272.1
24			108.10	135.10						296.80	323.8
26				158.50						348.30	379.9
28				183.80	220.50					403.90	440.6
30				210.90	253.00					463.60	505.7
32					287.80	335.80	383.70				575.4
34					324.90	379.00	433.10				649.5
36					364.20	424.90	485.50			667.50	728.1
38						473.40	540.90		676.10	743.70	
40							599.30		749.10		
42											
44											

Data collected by destructive sampling of 201 trees in accessible locations of the Yukon. Table shows total weight of bole wood (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Wood} = 0.3076 + 0.0234D^2H$$

$$R^2 = 0.9739 \quad SEE = 1.4952$$

TABLE B35. GREEN WEIGHT TABLE FOR TREMBLING ASPEN (ALL AGES)
YUKON TERRITORY
WEIGHT OF BOLE BARK (KILOGRAMS)

HEIGHT (M) DBH (CM)	4	6	8	10	12	14	16	18	20	22	24
4	0.75	.94	1.13	1.32	1.50						
6	1.22	1.45	2.07	2.50	2.92	3.35					
8	1.88	2.64	3.39	4.15	4.99	5.66	6.41				
10	2.73	3.91	5.09	6.27	7.45	8.63	9.81	10.99			
12	3.77	5.47	7.17	8.86	10.57	12.27	13.96	15.66			
14	5.00	7.31	9.62	11.94	14.25	16.56	18.87	21.19	23.50		
16		9.43	12.45	15.48	18.50	21.52	24.54	27.58	30.58		
18		11.84	15.66	19.49	23.31	27.13	30.96	34.78	38.60	42.43	
20		14.53	19.25	23.97	28.69	33.41	38.13	42.85	47.57	52.29	
22			23.22	28.99	34.64	40.35	46.06	51.77	57.48	63.19	68.9
24			27.56	34.36	41.15	47.95	54.75	61.54	68.34	75.14	81.9
26				40.26	48.23	56.21	64.19	72.16	80.14	88.12	96.1
28				46.63	55.88	65.13	74.38	83.63	92.88	102.10	111.4
30				53.47	64.09	74.71	85.33	95.95	106.60	117.20	127.8
32					72.87	84.95	97.04	109.18	121.20	133.30	145.4
34					82.22	95.86	109.50	123.10	136.80	150.40	164.1
36					92.13	107.4	122.70	138.09	153.30	168.60	183.9
38						119.6	136.70	153.78	170.80	187.80	
40							151.40	170.30	189.20		
42								187.70			
44								206.00			

Data collected by destructive sampling of 201 trees in accessible locations of the Yukon. Table shows total weight of bole bark (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Bark} = 0.3711 + 0.0059D^2H$$

$$R^2 = 0.9306 \quad SEE = 0.6318$$

TABLE B36. GREEN WEIGHT TABLE FOR TREMBLING ASPEN (ALL AGES)
YUKON TERRITORY
WEIGHT OF BRANCHES, TWIGS AND FOLIAGE (KILOGRAMS)

HEIGHT (M) / DBH (CM)	4	6	8	10	12	14	16	18	20	22	24
4			1.53	1.73	1.94						
6	1.63				3.47	3.93					
8	2.35					6.44	7.26				
10	3.27	4.55					10.95	12.23			
12	4.39	6.24						17.30			
14	5.72	8.23						23.29	25.79		
16		10.54	13.81						33.47		
18		13.15	17.30						42.18	46.33	
20		16.07	21.19							57.03	
22			25.79							68.85	75.1
24			30.20	37.57						81.81	89.2
26				43.97						95.89	104.5
28				50.88	60.92					111.10	121.1
30				58.31	69.83					127.40	138.9
32					79.35	92.46	105.60				158.0
34					89.49	104.30	119.10				178.3
36					100.20	116.80	133.40			183.20	199.8
38						130.10	148.60		185.50	204.00	
40							164.50		205.50		
42											
44											

Data collected by destructive sampling of 201 trees in accesible locations of the Yukon. Table shows total weight of branches, twigs and foliage (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{BTF} = 0.7069 + 0.0064D^2H$$

$$R^2 = 0.4830 \quad SEE = 2.5975$$

TABLE B37. GREEN WEIGHT TABLE FOR TREMBLING ASPEN (ALL AGES)
YUKON TERRITORY
WEIGHT OF TOTAL TREE COMPONENTS (KG)

HEIGHT (M) DBH (CM)	4	6	8	10	12	14	16	18	20	22	24
4	3.67	4.81	5.96	7.10	8.24						
6	6.53	9.10	11.67	14.24	16.81	19.38					
8	10.53	15.10	19.67	24.24	28.80	33.37	37.94				
10	15.67	22.81	29.95	37.09	44.23	51.37	58.51	65.65			
12	21.95	32.23	42.51	52.80	63.08	73.36	83.64	93.92			
14	29.38	43.37	57.36	71.36	85.35	99.35	113.30	127.30	141.30		
16		56.22	74.50	92.78	111.10	129.30	147.60	165.90	184.20		
18		70.79	93.92	117.10	140.30	163.50	186.50	209.60	232.70	255.90	
20		87.07	115.60	144.20	172.70	201.30	229.90	258.40	287.00	315.50	
22			139.60	174.20	208.70	243.30	277.80	312.40	347.00	381.50	416.1
24			165.90	207.00	248.10	289.30	330.40	371.50	412.70	453.80	494.9
26				242.70	291.00	339.30	387.50	435.80	484.10	532.30	580.6
28				281.30	337.30	393.20	449.20	505.20	561.20	617.10	673.1
30				322.70	386.90	451.20	515.50	579.70	644.00	708.20	772.5
32					440.10	513.20	586.30	659.40	732.50	805.60	878.8
34					496.60	579.20	661.70	744.20	826.80	909.30	991.8
36					556.60	649.10	741.70	834.20	926.70	1019.00	1112.0
38						723.10	826.20	929.30	1032.00	1136.00	
40							915.30	1030.00	1144.00		
42								1135.00			
44								1245.00			

Data collected by destructive sampling of 201 trees in accessible locations of the Yukon. Table shows total weight of total tree components (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$GW_{Tot} = 1.3872 + 0.0357D^2H$$

$$R^2 = 0.9465 \qquad SEE = 3.3194$$

TABLE B38. OVEN DRY WEIGHT TABLE FOR TREMBLING ASPEN (ALL AGES)
YUKON TERRITORY
WEIGHT OF BOLE WOOD (KILOGRAMS)

HEIGHT (M) DBH (CM)	4	6	8	10	12	14	16	18	20	22	24
4	0.92	1.33	1.74	2.15	2.56						
6	1.94	2.86	3.79	4.71	5.62	6.55					
8	3.38	5.01	6.65	8.29	9.93	11.57	13.21				
10	5.22	7.78	10.34	12.90	15.46	18.02	20.58	23.14			
12	7.47	11.16	14.84	18.53	22.22	25.90	29.59	33.28			
14	10.13	15.15	20.17	25.19	30.20	35.22	40.24	45.26	50.27		
16		19.76	26.31	32.87	39.42	45.97	52.53	59.08	65.63		
18		24.98	33.28	41.57	49.86	58.16	66.45	74.75	83.04	91.34	
20		30.82	41.06	51.30	61.54	71.78	82.02	92.26	102.50	112.70	
22			49.66	62.05	74.44	86.83	99.22	111.60	124.00	136.40	148.8
24			59.08	73.83	88.57	103.30	118.10	132.80	147.60	162.30	177.0
26				86.63	103.90	121.20	138.50	155.80	173.20	190.50	207.8
28				100.50	120.50	140.60	160.70	180.70	200.80	220.90	240.9
30				115.30	138.30	161.40	184.40	207.50	230.50	253.50	276.6
32					157.40	183.60	209.80	236.00	262.20	288.50	314.7
34					177.70	207.30	236.80	266.40	296.00	325.60	355.2
36					199.20	232.30	265.50	298.70	331.90	365.10	398.2
38						258.90	295.80	333.00	369.80	406.70	
40							327.80	368.70	409.70		
42								406.50			
44								446.20			

Data collected by destructive sampling of 201 trees in accessible locations of the Yukon. Table shows total weight of bole wood (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{Wood} = 0.0983 + 0.0128D^2H$$

$$R^2 = 0.9788 \quad SEE = 0.7391$$

TABLE B39. OVEN DRY WEIGHT TABLE FOR TREMBLING ASPEN (ALL AGES)
YUKON TERRITORY
WEIGHT OF BOLE BARK (KILOGRAMS)

HEIGHT (M) DBH (CM)	4	6	8	10	12	14	16	18	20	22	24
4			0.50	0.59	0.68						
6	0.55				1.38	1.59					
8	0.87					2.73	3.10				
10	1.29	1.87					4.77	5.35			
12	1.80	2.63						7.65			
14	2.40	3.54						10.36	11.50		
16		4.58	6.07						14.98		
18		5.77	7.65						18.92	20.80	
20		7.09	9.41							25.65	
22			11.36							31.01	33.8
24			13.49	16.83						36.88	40.2
26				19.73						43.26	47.1
28				22.86	27.41					50.15	54.6
30				26.23	31.45					57.55	62.7
32					35.76	41.70	47.64				71.4
34					40.36	47.06	53.77				80.5
36					45.23	52.75	60.26			82.81	90.3
38						58.75	67.13		83.88	92.26	
40							74.37		92.93		
42											
44											

Data collected by destructive sampling of 201 trees in accessible locations of the Yukon. Table shows total weight of bole bark (kilograms).
Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{Bark} = 0.1281 + 0.0029D^2H$$

$$R^2 = 0.8562 \qquad SEE = 0.4590$$

TABLE B40. OVEN DRY WEIGHT TABLE FOR TREMBLING ASPEN (ALL AGES) YUKON TERRITORY
WEIGHT OF BRANCHES, TWIGS AND FOLIAGE (KILOGRAMS)

HEIGHT (M) DBH (CM)	4	6	8	10	12	14	16	18	20	22	24
4	0.41	0.50	0.60	0.69	0.79						
6	0.65	0.86	1.08	1.29	1.51	1.73					
8	0.98	1.37	1.75	2.13	2.52	2.90	3.29				
10	1.41	2.01	2.61	3.21	3.81	4.41	5.01	5.61			
12	1.94	2.81	3.67	4.53	5.40	6.26	7.13	7.99			
14	2.57	3.74	4.92	6.09	7.27	8.45	9.62	10.80	11.97		
16		4.82	6.36	7.89	9.43	10.97	12.50	14.04	15.57		
18		6.05	7.99	9.93	11.88	13.82	15.77	17.71	19.65	21.60	
20		7.41	9.81	12.21	14.61	17.01	19.41	21.81	24.21	26.61	
22			11.83	14.73	17.64	20.54	23.45	26.35	29.25	32.16	35.1
24			14.04	17.49	20.95	24.41	27.86	31.32	34.77	38.23	41.7
26				20.49	24.55	28.61	32.66	36.72	40.77	44.83	48.9
28				23.73	28.44	33.14	37.85	42.55	47.25	51.96	56.7
30				27.21	32.61	38.01	43.41	48.81	54.21	59.61	65.0
32					37.08	43.22	49.37	55.51	61.65	67.80	73.9
34					41.83	48.77	55.70	62.64	69.57	76.51	83.5
36					46.87	54.65	62.42	70.20	77.97	85.75	93.5
38						60.86	69.53	78.19	86.85	95.52	
40							77.01	86.61	96.21		
42								95.47			
44								104.80			

Data collected by destructive sampling of 201 trees in accessible locations of the Yukon. Table shows total weight of branches, twigs and foliage (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimetres) outside bark. Enclosed figures indicate range of basic data.

$$DW_{BTF} = 0.2143 + 0.0031D^2H$$

$R^2 = 0.4591$ SEE = 1.2748

TABLE B41. OVEN DRY WEIGHT TABLE FOR TREMBLING ASPEN (ALL AGES)
YUKON TERRITORY
WEIGHT OF TOTAL TREE COMPONENTS (KILOGRAMS)

HEIGHT (M) DBH (CM)	4	6	8	10	12	14	16	18	20	22	24
4	1.64	2.36	2.83	3.43	4.03						
6	3.13	4.48	5.63	7.17	8.52	9.87					
8	5.29	7.62	10.00	12.41	14.80	17.20	19.59				
10	7.92	11.61	15.40	19.14	22.88	26.62	30.36	34.10			
12	11.21	16.60	21.98	27.37	32.75	38.14	43.53	48.91			
14	15.10	22.43	29.76	37.09	44.42	51.75	59.08	66.41	73.74		
16		29.16	38.74	48.31	57.89	67.46	77.04	86.61	96.18		
18		36.79	48.91	61.01	73.15	85.26	97.38	109.50	121.60	133.70	
20		45.32	60.28	75.26	90.20	105.20	120.10	135.10	150.00	165.00	
22			72.85	90.93	109.00	127.10	145.20	163.40	181.50	199.60	217.7
24			86.61	108.20	129.70	151.30	172.80	194.30	215.90	237.40	258.9
26				126.90	152.10	177.40	202.70	228.00	253.30	278.50	303.8
28				147.00	176.40	205.70	235.00	264.30	293.70	323.00	352.3
30				168.70	202.40	236.10	269.70	303.40	337.00	370.70	404.4
32					230.20	268.50	306.80	345.10	383.40	421.70	460.0
34					259.80	303.10	346.30	389.60	432.90	476.00	519.3
36					291.30	339.70	388.20	436.70	485.10	533.60	582.1
38						378.50	432.50	486.50	540.50	594.50	
40							479.20	539.00	598.80		
42								592.20			
44								647.10			

Data collected by destructive sampling of 201 trees in accessible locations of the Yukon. Table shows total weight of total tree components (kilograms). Height shown is tree height (metres); DBH is diameter at breast height (centimeters) outside bark. Enclosed figures indicate range of basic data.

$$DW_{Tot} = 0.4407 + 0.0187D^2H$$

$R^2 = 0.9577$ SEE = 1.5379

POOR

QUALITY

ORIGINAL